

Purchasing Week

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\$6 A YEAR U. S. AND CANADA \$25 A YEAR FOREIGN



How a P. A. Would Handle Castro

By DEXTER M. KEEZER

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McGraw-Hill Economic Advisor

I was all cranked up to make a contribution to the fund to ransom the anti-Castro Cuban invaders with 500 tractors when the deal blew up because Castro had such outsize ideas of a suitable ransom tractor size and cost.

If a purchasing agent—perhaps named Lincoln or Washington to go along with the Roosevelt and Eisenhower members—had been included in the U. S. ransom committee, this debacle, piled upon the invasion debacle, might have been avoided. Since merchandise was to be exchanged for people, a purchasing agent would surely have thought of calling for some specifications of the merchandise in question before plunging ahead—to a world resounding collapse.

Conclusion Criticized

Those of my friends and associates to whom I boldly broadcast my conclusion that I should contribute to the tractor ransom fund were almost unanimously of the opinion that I had blown a mental gasket. Active promotion of the kidnaping trade was one of the milder characterizations of my decision.

However, they didn't shake what I still think were the firm moral foundations of my disposition to help buy the release of Castro's captives. These foundations were constructed partly on humanitarian impulse, but mostly on the feeling that, having been responsible for getting the Cuban invaders in Castro's prisons, we in the United States have a very heavy responsibility to do everything possible to get them out.

It's not a case, as I see it, where the standard argument against paying ransom to a kidnaper applies. We turned the victims over to the kidnaper. That, it seems to me, gives us a very special obligation to get them released.

Formula for Losing Cold War

However, I can't help feeling that, both in the interest of good morality and good government, the invitation to contribute to the tractor ransom fund should have been accompanied by an announcement for the forced resignations of at least a few of the federal functionaries who made such a magnificent mess of the Cuban invasion. Indeed, it strikes me that if the cover-up procedure following the invasion catastrophe were to become standard practice, it would provide almost the ideal formula for losing the cold war, as well as lesser conflicts along the way.

When the Cuban invasion became such a colossal cropper there naturally was much public demand to know who was responsible, and along with it an urgent and even desperate desire to have those responsible fired forthwith for incompetence demonstrated under a world spotlight. But it seems to me this eminently just and proper desire was promptly frustrated by announcement that "President Kennedy has stated from the

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Panorama

• **Buying Plastics** can be difficult, what with the wide selection available. The spread on pp 16-17 is designed to help you make the right choice.

• **Used Equipment Sales** are continuing brisk. For the latest auction prices and a rundown of coming sales, see the listing on page 12.

• **'School for Strategists'** takes up capital investment problems this week. Turn to page 14 for some fun that may prove profitable.

• **Auto Fleet Buying** presents perennial problems. Consultant Robert C. Kelley takes up some of them in 'Professional Perspective' on page 20.

Aluminum Pay Hike Near; Industry Silent on Prices

New York—With the deadline for aluminum wage hikes only one week away, primary producers are still maintaining a blackout on price moves.

Industry observers all agree, however, that price rises must eventually be posted (a growing cost squeeze makes that a foregone conclusion). The big question according to these experts is: When will the changes be made—and in what product lines?

A sampling of industry opinion reveals these alternatives:

• Across-the-board increases right now—on mill products as well as on primary metal.

• Spotty boosts on mill products now or in early fall—with

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Value Analysis Saves Boeing \$6-Mil. Via Smart Buying, Planning, Packaging

Detroit Jacking Up 2-Ply Tire Usage On 1962 Models

Akron—Car makers are getting ready for a wholesale switch to two-ply tires in what is shaping up as the biggest changeover since tubeless casings were introduced seven years ago.

When the 1962 models roll off the assembly lines, most of the familiar nameplates (standards as well as compacts) will feature the two-plys.

The new design tires—which have been installed on some make compacts for the last six months—are built with two plies of rubberized fabric instead of the four that have been considered standard for several decades. According to the tire makers, the two-ply versions run cooler and give a softer ride—without sacrificing wearability.

All five producers of original

(Turn to page 31, column 2)

Priorities Ruled Needless Despite New War Scare

Washington—Where would a big buildup in defense spending hit the industrial buyer the quickest?

Short-range, the buyer would do well to keep his eye on high-temperature nickel alloys. Prime and subcontractors now consume about 20% of total shipments of this material, according to the Office of Civil and Defense Mobilization. Other key indicators showed far lower consumption rates.

OCDM is taking a sharp look at consumption figures in line with the new military stepup which is expected to add some \$2-billion to \$3-billion to the federal budget this year.

Government experts have come up with a preliminary conclusion that industrial mobiliza-

(Turn to page 32, column 2)

Square Fluorents

Warren, Pa.—Interelectric Div. of El-Tronics, Inc., has begun marketing a 9-in. sq. fluorescent light bulb designed to fit directly into all existing 9-in. recessed incandescent fixtures, with the addition of an instant starting ballast.

Thus, El-Tronics gets the jump on General Electric and Westinghouse—both of which had previously announced 12-in. prototype bulbs. GE expects to start volume shipments in the fall.

The El-Tronics bulb resembles a standard fluorescent that

(Turn to page 4, column 2)

ICC Okays Charges By Eastern Rails On LCL Pickup, Delivery

Washington — Eastern railroads that now provide free pickup and delivery service on less-than-carload freight shipments have been authorized by the Interstate Commerce Commission to set rates ranging from 20¢ to 60¢/100 lb. for the extra service.

Carriers that already levy such charges were authorized by the ICC to increase the rates by 5¢-49½¢/100 lb.

The ICC move sent shippers scurrying for ways to combat the new charges. But they were sharply divided on what course of action to take.

One group, fearful that a rush to divert LCL traffic from rails may spark higher truck and freight forwarder rates, is urging caution in cutting out LCL shipments. Another group, favoring drastic action, has already begun the switch to other modes. One traffic manager of a large Eastern manufacturer, for example, told PURCHASING WEEK that he had "promptly" notified field offices to divert LCL ship-

(Turn to page 4, column 1)

Same Auto Warranties, But More Service in '62

Detroit — Despite much talk that the auto makers may boost new car warranties to 27 months or 27,000 miles it now looks as if the industry will stick with the 12-12 warranty introduced last year and, instead, offer more so-called "service-free" cars for the 1962 model year. Here's what to expect by way of service features in the new models:

(Turn to page 32, column 4)

Authorities List Areas Where VA Theories Produce Best Results

New York—P.A.'s are joining the value analysis parade in ever growing numbers and are contributing as much as 25% of total VA savings through streamlined procurement techniques.

This week Boeing furnished a striking example of what purchasing can do when it posted the results of its stepped-up VA program at its Seattle facility—a whopping \$6-million savings in 1960, of which 25% was attributed to changes in procurement specifications. The balance of the savings, according to Boeing officials, was about equally divided between engineering changes, packaging changes, overhead reductions, materials handling changes, and miscellaneous programs, such as reclamation and switching spare parts.

What the results of Boeing's program underscore is that value analysis finally has come of age. No longer is the problem one of convincing management of its worth—that's been proven—but, rather, one of turning desire for savings into action on the part of the company.

"The main reason why value analysis is now coming of age is because of a major change in attitudes. Today people who have developed a sound understanding of value analysis principles utilize this method of thinking to eliminate unnecessary costs," says Howard L. C. Leslie, executive vice president of Value Analysis, Inc., a consulting firm in the field.

At present, value analysis promises savings ranging from 25% to 70%, depending on the product and its stage of development. A large part of the respon-

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Purchasing Week's Purchasing Perspective

INDUSTRY'S "best effort" in the field of defense procurement is no longer good enough—if it's not based on new ideas, new techniques, and new objectives, according to Stanley W. Burriss, vice president, Lockheed Aircraft Corp., and general manager of the Missiles and Space Co.

Speaking before the third annual industry Missile and Space Conference and Aerospace Exposition in Detroit, Burriss urged that the defense establishments take an altogether different approach to the goal of drastic cost reduction for the same degree of defense effectiveness.

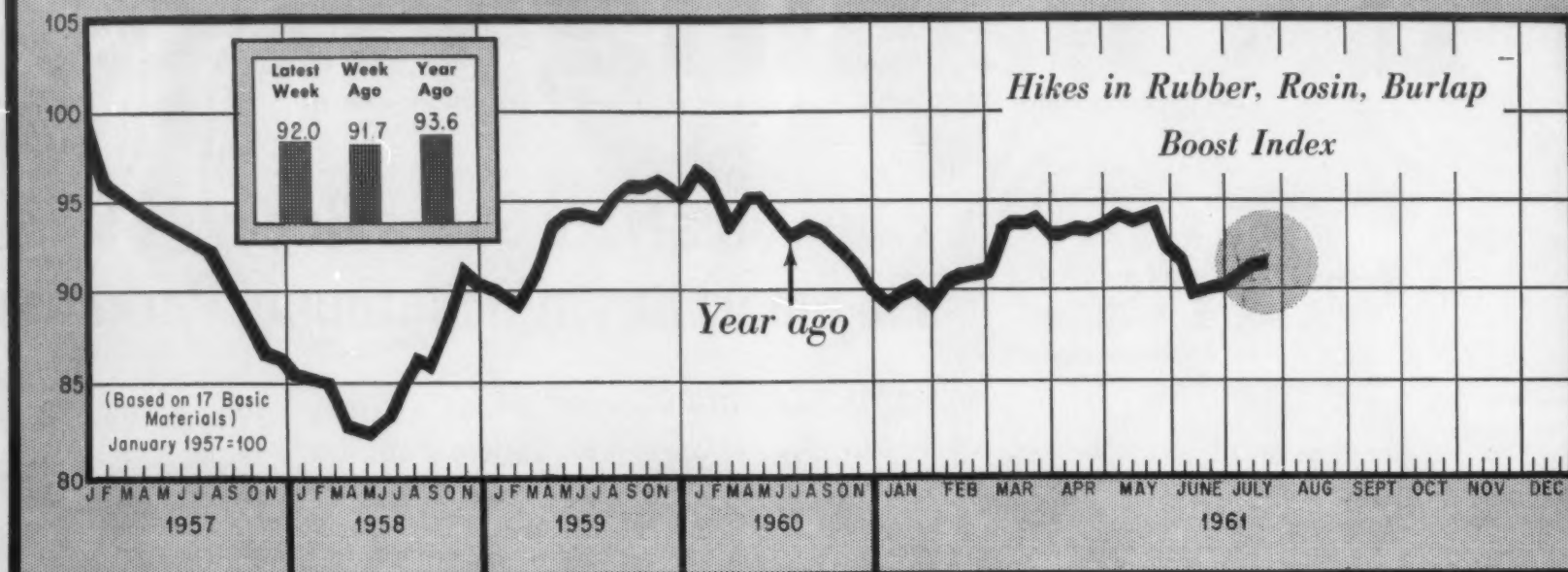
Burriss termed his new approach "selective technology." He explained that what he has in mind is for defense organizations to dream up ideal weapons systems to meet the awesome challenges of the next decade or so—and then determine the precise technology that is needed to make such innovations possible.

These new techniques then could become the basis for sound procurement planning, as well as for R&D programs that could

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Purchasing Week Industrial Materials Price Barometer

This index, based on 17 basic materials, was especially designed by the McGraw-Hill Department of Economics.



This Week's Commodity Prices

	July 19	July 12	Year Ago	% Yrly Change
METALS				
Pig iron, Bessemer Pitts., gross ton.....	67.00	67.00	67.00	0
Pig iron, basic, valley, gross ton.....	66.00	66.00	66.00	0
Steel, billets, Pitts., net ton.....	80.00	80.00	80.00	0
Steel, structural shapes, Pitts., cwt.....	5.50	5.50	5.50	0
Steel, structural shapes, Los Angeles, cwt.....	6.20	6.20	6.20	0
Steel, bars, del., Phila., cwt.....	5.98	5.98	5.975	+ .1
Steel, bars, Pitts., cwt.....	5.675	5.675	5.675	0
Steel, plates, Chicago, cwt.....	5.30	5.30	5.30	0
Aluminum, pig, lb.....	.26	.26	.26	0
Secondary aluminum, #380 lb.....	.212	.212	.24	-11.7
Copper, electrolytic, wire bars, refinery, lb.....	.306	.306	.326	-6.1
Brass, yellow, (sheet) lb.....	.493	.493	.506	-2.6
Lead, common, N.Y., lb.....	.11	.11	.12	-8.3
Nickel, electrolytic, producers, lb.....	.813	.813	.74	+ 9.9
Tin, Straits, N.Y., lb.....	1.157	1.170	1.030	+12.3
Zinc, Prime West, East St. Louis, lb.....	.115	.115	.13	-11.5
FUELS				
Fuel oil #6 or Bunker C, Gulf, bbl.....	2.20	2.20	2.30	-4.3
Fuel oil #6 or Bunker C, N.Y., barge, bbl.....	2.62	2.62	2.62	0
Heavy fuel, PS 400, Los Angeles, rack, bbl.....	2.10	2.10	2.15	-2.3
Lp-Gas, Propane, Okla., tank cars, gal. (incl. discount).....	.025	.025	.035	-28.6
Gasoline, 92 oct. reg., Chicago, tank car, gal.....	.12	.12	.126	-4.8
Gasoline, 84 oct. reg., Los Angeles, rack, gal.....	.108	.108	.107	+ .1
Kerosene, Gulf, Cargoes, gal.....	.093	.093	.09	+ 3.3
Heating oil #2, Chicago, bulk, gal.....	.088	.088	.09	-2.2
CHEMICALS				
Ammonia, anhydros, refrigeration, tanks, ton.....	94.50	94.50	90.50	+ 4.4
Benzene, petroleum, tanks, Houston, gal.....	.34	.34	.34	0
Caustic soda, 76% solid, drums, carlots, cwt.....	4.80	4.80	4.80	0
Coconut oil, inedible, crude, tanks, N.Y. lb.....	.125	.125	.153	-18.3
Glycerine, synthetic, tanks, lb.....	.25	.25	.293	-14.7
Linseed oil, raw, in drums, carlots, lb.....	.191	.201	.163	+17.2
Phthalic anhydride, tanks, lb.....	.195	.195	.185	+ 5.4
Polyethylene resin, high pressure molding, carlots, lb.....	.275	.275	.325	-15.4
Polystyrene, crystal, carlots, lb.....	.18	.18	.215	-16.3
Rosin, W.G. grade, carlots, fob N.Y. cwt.....	13.15	12.95	15.10	-12.9
Shellac, T.N., N.Y. lb.....	.31	.31	.31	0
Soda ash, 58%, light, carlots, cwt.....	1.55	1.55	1.55	0
Sulfur, crude, bulk, long ton.....	23.50	23.50	23.50	0
Sulfuric acid, 66% commercial, tanks, ton.....	22.35	22.35	22.35	0
Tailow, inedible, fancy, tank cars, N.Y. lb.....	.06	.065	.059	+ 1.7
Titanium dioxide, anatase, reg. carlots, lb.....	.255	.255	.255	0
PAPER				
Book paper, A grade, Eng finish, Untrimmed, carlots, cwt.....	17.75	17.75	17.75	0
Bond paper, #1 sulfite, water marked, 20-lb, 16-carton lots, cwt.....	25.20	25.20	25.20	0
Chipboard, del. N.Y., carlots, ton.....	100.00	100.00	100.00	0
Wrapping paper, std. Kraft, basis wt. 50 lb rolls.....	9.50	9.50	9.50	0
Gummed sealing tape, #2, 60 lb basis, 600 ft. bundle.....	6.30	6.60	6.30	0
BUILDING MATERIALS				
Cement, Portland, bulk carlots, fob New Orleans, bbl.....	3.65	3.65	3.65	0
Cement, Portland, bulk carlots, fob N.Y., bbl.....	4.20	4.20	4.18	+ .5
Southern pine, 2x4, s4s, trucklots, fob N.Y., mftbm.....	115.00	115.00	122.00	-5.7
Douglas fir, 2x4, s4s, carlots, fob Chicago, mftbm.....	125.00	126.00	136.00	-8.1
Spruce, 2x4, s4s, carlots, fob Toronto, mftbm.....	85.00	85.00	88.00	-3.4
Fir plywood, 1/4" AD, 4x8, dealer, crld, fob mill, msf.....	64.00	68.00	64.00	0
TEXTILES				
Burlap, 10 oz. 40", N.Y., yd.....	.138	.132	.115	+20.0
Cotton middling, 1", N.Y., lb.....	.349	.347	.340	+ 1.2
Printcloth, 39", 80x80, N.Y., spot, yd.....	.175	.175	.202	-13.4
Rayon twill, 40 1/2", 92x62, N.Y., yd.....	.205	.205	.225	-8.9
Cotton drill, 1.85, 59", 68x40, N.Y., yd.....	.355	.355	.395	-10.1
Wool tops, N.Y., lb.....	1.595	1.595	1.445	+10.4
HIDES AND RUBBER				
Hides, cow, light native, packers, Chicago, lb.....	.195	.195	.180	+ 8.3
Rubber, #1 std ribbed smoked sheets, N.Y., lb.....	.299	.291	.415	-28.0

Purchasing Week's

Price Perspective

MIXED BLESSING—Rising productivity—usually regarded as an optimistic sign by most business observers—is kicking up a lot of trouble in two key industries:

• **In autos**—The United Auto Workers are asking for a boost in their annual productivity improvement factor—from 2.5% to 3.4%. Union officials claim that the use of automated equipment makes the old figure obsolete.

Auto makers indicate that they will fight the new move tooth and nail. For, as one spokesman points out: "The increase, if it goes through, would automatically mean 2 1/2¢/hr. in additional wages to every worker each year."

• **In steel**—Here the problem is one of technological unemployment rather than wage rates. A new government report finds that since the beginning of the year a substantial jump in steel productivity has prevented any significant drop in huge steel unemployment rolls.

The survey, covering 139 plants, reveals that while weekly steel tonnage jumped 13% between February and April, employment rose only 2%. As a result, the survey reports, "The substantial employment decline of 149,000 or 25% noted during the year ending February, 1961, remains largely unrelieved."

But the steel development is not without its brighter side. This sharp rise in productivity has enabled steel makers to operate in the black—despite rising wage rates and growing price weaknesses.

• • •

ABOUT FACE—Competition is forcing more and more firms to back down on price rises—after they have been officially announced.

The latest example is Crucible Steel, which was forced to rescind a 1%-3% price increase on nickel-bearing stainless steel when the rest of the industry failed to go along.

To be sure there are special circumstances around stainless. Specifically, many producers have contracts which still permit them to obtain nickel at the old low price of 74¢/lb. (It's only next month that the higher 81 1/4¢/lb. price becomes effective.)

But that doesn't obscure the fact that if steel was noncompetitive (as many officials still contend) such backtracking never would have occurred.

Another glaring example of this "boost and then rescind" trend occurred earlier this year in plastics. Dow Chemical had to do an abrupt about-face on polystyrene when other major producers continued to quote lower prices.

Sometimes the reversal is unofficial—as in the case of fork lift trucks, where tags were recently boosted 3% by major manufacturers. According to current reports, discounting and price shading subsequent to the rise have, in effect, brought prices down to original levels.

The bearings industry may soon furnish another example. Major producers have called for increases late this summer and early fall, but may quickly have to backtrack if small suppliers refuse to follow the leaders.

• • •

NOTHING SERIOUS—Slowdown in the rate of incoming hard goods orders (seasonally adjusted June levels were down 1%) is not particularly serious, according to informed business observers.

They note, for example, that most of the drop can be traced to the failure of the Defense Dept. to issue its usual large number of orders in June—the final month of the government's fiscal year.

Moreover, say these observers, a drop in any one month hardly indicates any basic change in trend. The decline would have to persist for at least three months to be of any significance.

Another comforting thought: Orders are still on a par with sales, and thus manufacturers' backlogs have remained steady at May's increased levels.

U.S. Steel Cuts Benzene Price 3¢; Other Producers to Follow Along

New York—U.S. Steel cut its benzene tags 3¢, bringing prices back to January, 1960, level of 31¢/gal.

The move, coming at a time when demand is running well, took most of the chemical industry by surprise. "I had no inkling of it," said one executive. "Not a single customer had called in months about competitors quoting lower prices."

Industry observers predicted that most producers would have to go along with the U.S. Steel price cut. "We'll have to reduce prices on all our undelivered benzene," said a major Eastern producer, "even though we've already contracted all our '61 output at the old price of 34¢."

The recession decline in steel operations had put the key coke-oven chemical in short supply. New capacity from petroleum companies has been coming on-stream steadily during the year, but insiders felt the price would stay firm until the 4th quarter when negotiations for 1962 contracts begin.

"What speeded up the move,"

observed one industry expert, "was that the newcomers started a hard sell to get rid of their production. The established firms can't wait till the 4th quarter to meet this competition."

The intensified sales push by new producers was sparked mainly by reports that large quantities of petro-benzene which had been contracted for export were being offered on the domestic market because overseas customers weren't ready for them.

This Week's Scrap Prices

	July 19	July 12	Year Ago	% Yrly Change
Steel, #1 hv, divd Pitt, ton.....	36.00	36.00	30.00	+20.0
Steel, #1 hv, divd Clev, ton.....	34.50	34.50	30.00	+15.0
Steel, #1 hv, divd Chic, ton.....	36.00	36.00	30.00	+20.0
Copper, #1 wire, dlr buy, fob NY, lb.....	.24	.24	.23	+4.3
Copper (hv) & wire mix, dlr buy, fob NY, lb.....	.22	.22	.21	+4.8
Brass, light, dlr buy, fob NY, lb.....	.125	.125	.105	+19.0
Brass, hv yellow mix, dlr buy, fob NY, lb.....	.145	.145	.115	+26.1
Alum (cast), mixed, dlr buy, fob NY, lb.....	.10	.10	.10	0
Alum (sheet), old clean, dlr buy, fob NY, lb.....	.095	.095	.095	0
Zinc, old, dlr buy, fob NY, lb.....	.03	.03	.04	-25.0
Lead, soft or hard, dlr buy, fob NY, lb.....	.07	.07	.083	-15.7
Rubber, mix auto tires, divd Akron, ton.....	11.00	11.00	11.50	-4.3
Rubber, synth butyl tubes, East, divd lb.....	.063	.063	.078	-19.2
Paper, old corrug box, dlr, Chic, ton.....	16.00	16.00	18.00	-11.1
Paper, #1 mixed, dlr, NY, ton.....	1.00	1.00	1.00	0
Polyethylene, clear, dlr, NY, lb.....	.07	.07	.11	-36.4

Imperial Chemical Cuts 'Terylene' Fiber Prices

London—Imperial Chemical Industries has cut prices of all "terylene" polyester staple fibers, tow and top, by about 10¢/lb., reducing cost of its most popular varieties to around \$1.28/lb.

In addition, 1½ denier staple fiber, widely used to mix with wool and cotton, was slashed an extra 7¢, bringing its price down to that of basic staples. Fibers of special length, denier or color, will cost slightly more. The reductions announced by Imperial Chemical cover export as well as domestic prices.

Kimberly-Clark Reduces Roll Grade Paper Prices

New York—Kimberly-Clark will reduce its prices for some roll grades of printing papers by \$3 to \$10/ton on Aug. 1. The rest of the industry will follow.

The price cuts, which do not apply to sheet papers, are scheduled as follows: ground wood super paper, \$3/ton; 45-lb. and 50-lb. machine-coated, \$5/ton; 43-lb. machine-coated, \$7/ton; and 40-lb. machine-coated, \$10/ton. All these grades are used in magazine and catalog printing.

Price Changes

Synthetic rubber—Improved manufacturing techniques resulted in a 2¢/lb. reduction for two types of Du Pont's Neoprene synthetic rubber—the WHV and the latex 842-A grades.

Building wire—General Cable kicked off an industry-wide price boost of 1% for thermoplastic jacketed building wire (Romex-TJ type NM) and 5% for all other types.

Gasoline and rubber additives—Three chemicals used as additives in gasoline and rubber—UOP 88, VOP 88-S, and UOP 288—will be reduced 10¢/lb. on August 1 by Universal Oil Products.

Paracresol—Sherwin-Williams initiated a 4¢/lb. cut in paracresol prices in a move to broaden markets for this important raw material in antioxidant and dyestuff production.

Stainless steel—Failure of other producers to go along caused Crucible Steel to rescind its price boosts of ½¢ to 2¼¢/lb. announced July 1.

Gum rosin—By diverting much of their output to Commodity Credit Corp., producers brought about a 20¢ to 25¢/cwt. increase in New York market prices for all grades of gum rosin.



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ICC Okays New PUD Charges by Railroads

(Continued from page 1)
ments to trucks wherever possible. Another company, in the Midwest, reported that it has issued instructions to cut out carload consignments to railroads that have put PUD charges into effect.

Shipper groups, for the most part, were skeptical about the chances of a successful appeal for reconsideration by the ICC, which had previously twice suspended the charges. Chief reason for their pessimism was the strong wording of the decision itself.

'Charges Justified'

The ICC ruling held the charges were justified because the Eastern lines simply "are no longer in a financial position to conduct less-carload operations at huge losses." The charges will give railroads an estimated \$7-million a year in new revenue and hence materially aid the rail lines in continuing the service, the ICC decision said, adding that it doubted that diversion to other modes would be "large-scale."

Shippers strongly contest this view, pointing to figures which show that for many commodities the addition of pickup and delivery charges put LCL rail rates higher than LTL truck rates. In the view of many, this makes the diversion of freight to trucks virtually mandatory in order to get "the best transportation buy for my company," as one shipper put it.

Some shippers were willing to concede that the best course of action probably was suggested in the ICC's recommendation that railroads and shippers make a "conscientious effort to diagnose the problem and find a remedy for it."

There were indications that the "National Shippers Task Force" recently formed by the Eastern Industrial Traffic League would soon begin working in this direction.

A major bone of contention, however, is the railroads' claim that the PUD charges reflect the added costs to them of drayage, whereas shippers and shipper groups have strongly protested this point with studies showing that intercity movement of freight was actually less than the PUD charges at some points.

REA Incentive Rates

Many shippers are pinning their hopes on a broadening of REA Express incentive rates to more specific commodities to more points. Shippers and REA are hard at work on development of such rates, but trucker opposition has been formidable.

Meanwhile, a more immediate solution is seen by some shippers in greater use of shipper associations. A number of shippers are assessing trucking costs to points where their small shipments can be routed in consolidation via rail.

The ICC itself outlined some other solutions that have been proposed in the past: improved train service with definitely scheduled loading and unloading periods; more through or pool cars; more joint rates and through service; keeping freight and transfer houses open more hours and days; movement of LCL freight

via piggyback; pooling of pickup and delivery service, and creation of a separate rail agency to handle LCL traffic.

The ICC took no position as to the merits of any of these suggestions, and said it did not believe a formal investigation by the commission into the LCL problem is now called for. But it said the commission would cooperate with an organized but informal rail-shipper effort to find a solution.

The new pickup and delivery charges range from 20¢/100 lb. in smaller cities to 60¢ in New York. Major railroads imposing them include the Baltimore & Ohio, Chesapeake & Ohio, Erie-Lackawanna, New York Central, Pennsylvania, Wabash, and the Nickel Plate.

In addition, the Central of

New Jersey, the Lehigh Valley, and the Reading are increasing their existing pickup and delivery charges in amounts ranging from 5¢ to 49.5¢.

PUD charges per 100 lb. at major points are:

Akron, 40¢; Baltimore, 50¢; Buffalo, 40¢; Chicago, 60¢; Cincinnati, 47¢; Cleveland, 50¢; Detroit, 53¢; Indianapolis, 40¢; Jersey City, 43¢; New York City, 60¢; Pittsburgh, 55¢; Toledo, 40¢; Washington, 50¢; Wilmington, 40¢; Elkins, W. Va., 38¢; New Castle, Pa., 38¢.

At some points, charges are not being levied by all lines instituting them generally. Toledo, for example, has PUD charges levied by the B&O, Pennsylvania, Wabash, Ann Arbor & Michigan, but not by the C&O and New York Central.

El-Tronics First on the Market With Square Fluorescent Lights

(Continued from page 1)
has been bent back and forth six times to get a square shape. Two designs are available—one shows the bare tube, the other is covered with a waffle pattern that diffuses the light.

The bulb is rated at 40 watts

tancy. The light is almost shadowless, and is expected to find wide usage where space previously had ruled out fluorescents and as a "point" light source, such as on inspection benches.

Major fixture makers are now at work developing receptacles



SQUARE FLUORESCENT, now available from El-Tronics, Inc., fits into standard 9-in. recessed fixture. Lamp comes in two models.

with a design life of 10,000 hr. Limited quantities are now available at \$6.95. An El-Tronics spokesman told PURCHASING WEEK that the company will expand the current production rate of "100 or so bulbs a week" as soon as demand warrants an increase.

The 9-in. fluorescent, El-Tronics officials said, gives more than twice the light output of an equivalent wattage incandescent with a much longer life expect-

for the new fluorescents. The bulb suppliers have been working with the fixture people to insure a wide assortment of models when the square bulbs become available in quantity.

Although El-Tronics is concentrating on the smaller bulb first, the firm expects to have a 12-in. model available in about "four to six months." The 9-in. and 12-in. sizes may develop into the first two "standard" models in this area of the industry.

Excess Longhorn Pig Tin Offered for Sale by GSA; Bids Taken Until Aug. 2

Washington — The General Services Administration, in response to a request from the International Tin Council in London, has announced the release of 500 long tons of pig tin from the inventory formerly held by the Federal Facilities Corp.

The Tin Council first had requested release of nearly 4,000 tons in an effort to keep prices on world markets from rising any further. Later it asked for release of tin from the strategic stockpile. GSA decided to release the 500 surplus tons first to see what effect it will have on

market prices, but a spokesman said the agency undoubtedly will release the rest of the tin over a period of time.

The tin offered for sale by GSA is considered excess to government needs. It is the "Longhorn" brand of pig tin, refined in Texas and stored at Wardwell, Ohio, close to consuming centers in Cleveland, Youngstown, Wheeling, and Pittsburgh.

The tin will be offered for sale in 50 lots of 10 tons each, consisting of 40 lots of Grade A and 5 lots each of Grade B and C. The sale will be made by sealed bidding which will be accepted by GSA until noon on Aug. 2.

The United States to date has no intention of releasing any metal from the strategic stockpile.

Transport Study Urged on Congress; Kennedy Delays Report on Problems

Washington — The Kennedy Administration has urged Congress to authorize a census of transportation in 1963 that would include a survey of freight shipments and a comprehensive inventory of transportation facilities.

Frank Barton, Deputy Undersecretary of Commerce for Transportation, told a House subcommittee that although transportation is a \$100-billion business, there are great gaps in data about its functioning and scope.

He said government agencies need up-to-date facts and statistics to formulate transportation goals, forecast requirements, and prepare legislation. Carriers and shippers need similar facts, he said, for "decisions on their policy and action programs."

The transportation census also was endorsed by the National Industrial Traffic League and motor and rail trade organizations.

Barton said the census would collect data on the use of for-hire, private and exempt carriers in all modes of transportation and on the distribution of products from manufacturing plants. It would show both geographically and by commodity the weights, sizes, volumes, distances, and types of carriers moving the traffic.

Facts also would be collected on rates and shipper costs. Data would be developed from samples of bills of lading showing volumes of products shipped, origins and destinations, means of transport, weight of shipments, and other related factors.

Meantime the White House has decided to delay sending to Congress until next year President Kennedy's short-range proposals for dealing with the nation's transportation problems.

No reason was announced, but it was understood that the Administration feels it would be unwise to send a special Presidential message to Congress this late in its current session. It is doubtful that Congress would have time to act on any of the President's transportation proposals before adjourning sometime around Labor Day.

When the message is transmitted, the President will recommend that Congress take a number of steps to strengthen the common carriers.

He probably will propose:

- A crackdown on illegal for-hire transportation.
- Tax relief and a better break on depreciation for the railroads.

• Some tightening up of rate-making standards to prevent destructive and unfair rate-cutting.

• A Congressional study on relaxing rules that prevent railroads from owning other modes of transportation.

Shippers to Tell Views On Measures to Revise ICC Rate-Making Rules

Washington — Shippers will have an opportunity this week to present their views to Congress on proposed changes in the rate-making provisions of the Interstate Commerce Act.

The Senate Commerce Committee will resume hearings Tuesday (July 25) on the legislation. At previous hearings, representatives of motor, rail and water carriers testified. During the new round, the committee will hear from shipping groups, the Interstate Commerce Commission, the Dept. of Commerce, and state regulatory agencies.

The National Industrial Traffic League and other shipper organizations plan to express strong opposition to the measure, which would rewrite the present rate-making rule. This provides that the Interstate Commerce Commission shall not hold the rates of one mode of transportation to a particular level to protect the traffic of another.

The truck and barge industries claim that the railroads have used the present rule, as interpreted by the ICC, to go on a destructive rate-cutting binge. The proposed legislation would require the ICC, in passing on competitive rates, to consider the impact that rate reductions proposed by one mode would have on other carriers.

The Kennedy Administration is expected to endorse a modified version of the bill. Its proposal probably will be limited to requiring the ICC to give greater attention to whether railroads and other carriers recover costs in setting their rates.

Clarence D. Martin, Jr., Undersecretary of Commerce for Transportation, has said the basic provisions of the existing rate-making rule are sound, but that "a further standard is needed to prevent the selective elimination of certain competitive common carrier services through ruthless rate policies."

Weekly Production Records

	Latest Week	Week Ago	Year Ago
Steel ingot, thous tons	1,860	1,779	1,476
Autos, units	133,593	93,444*	112,041
Trucks, units	24,595	16,943*	21,624
Crude runs, thous bbl, daily aver	8,167	7,954	8,257
Distillate fuel oil, thous bbl	12,922	12,560	12,972
Residual fuel oil, thous bbl	5,757	5,227	5,800
Gasoline, thous bbl	29,558	28,636	30,031
Petroleum refineries operating rate, %	82.3	80.2	84.5
Container board, tons	125,023	109,799	138,486
Boxboard, tons	68,160	52,387	76,834
Paper operating rate, %	53.7	91.2*	58.3
Lumber, thous of board ft	129,809	209,740	141,469
Bituminous coal, daily aver thous tons	765	1,750*	785
Electric power, million kilowatt hours	15,071	14,133	14,208
Eng const awards, mil \$ Eng News-Rec	509.4	594.6	519.8

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Washington Perspective

The House Ways and Means Committee has tentatively approved an 8% tax credit on machinery and equipment. What this means (if the plan becomes law) is that a company may deduct from its federal tax bill 8% of the money it spent in a given year for new or used machinery and equipment.

The situation still is extremely fluid, however. Treasury Secy. Dillon has said that if the committee does not come up with enough revenue-raisers to offset income lost through the tax credit (more than \$1-billion), President Kennedy would veto the bill. As of now, revenue-raisers would fall about \$500-million short of losses. The committee hopes to finish work on the bill by mid-August. If figures still are out of balance then, it may drop the matter until next year.

Sen. Wallace F. Bennett (R-Utah) wants to give a tax break to hard-pressed coal-lead-zinc producers. He has introduced a bill to lift the 50% net income limit on depletion allowances. Under present law, a producer of lead or zinc can take his 23% depletion allowance on up to only 50% of his taxable income. The Bennett plan, which excludes oil, would permit producers to take their depletion on 100% of their taxable income.

Bennett made his proposal because of a feeling that the Kennedy Administration is dragging its feet on the use of new or tighter import controls or higher tariffs to aid domestic mining industries. The Administration is likely to oppose the plan, thus materially hurting its chances in Congress.

• • •

The President's committee on equal job opportunity has eased slightly its anti-discrimination rules. The action came as a result of complaints from federal contractors and from the Defense Dept. The changes include (1) raising the size of the contract

covered from \$5,000 to \$10,000, (2) simplifying the reporting forms to be filed by contractors and larger subcontractors, and (3) exempting certain suppliers of raw materials.

Nine major defense contractors already have signed non-discrimination agreements. The committee, headed by Vice President Lyndon B. Johnson, plans to use these voluntary agreements as models for other contractors.

• • •

Three major railroad merger cases are moving through the machinery of the Interstate Commerce Commission. Hearings are underway or have been completed in cases involving the and Western Pacific, New York Southern Pacific and Santa Fe, Central and Chesapeake & Ohio and Baltimore & Ohio, and the Atlantic Coast Line and Seaboard Line. The Justice Dept., still formulating its position on the proposed merger, has asked the ICC to reject applications for control of Western Pacific and B & O, but purely on technical grounds.

• • •

A federal grand jury is reported investigating a possible price-fixing conspiracy in asphalt sales in Florida. The Justice Dept., as is its custom, refused to confirm that an inquiry into the south Florida highway program is underway in Miami. But it is known that 25 companies have been subpoenaed. They are being questioned on whether or not they made secret agreements through trade associations to fix prices or to divide markets.

• • •

An Indiana congressman wants to know about those foreign drugs the government has been buying (PW July 17, p. 4). Rep. Richard L. Roudebush (R-Ind.) requested a report on the matter from the Veterans Administration and the Defense Dept. He said he received a complaint from Charles Pfizer Co., an Indiana firm, that defense was buying one of its patented antibiotics from an Italian manufacturer who was producing it without license.

House Group Okays Bill Enabling Shippers to Get Refunds on Overcharges

Washington—A House Commerce subcommittee has approved legislation which would enable shippers to seek reparations from motor carriers and freight forwarders when they feel they have been overcharged.

At present, shippers have no redress either before the Interstate Commerce Commission or the courts in such cases, although both rail and water carriers are subject to reparation claims.

In approving the proposed legislation, the subcommittee wrote in an amendment proposed by freight forwarders and concurred in by the trucking industry. It provides that any award to shippers must be limited to the actual loss suffered as the result of an unlawful rate; damages shall be presumed to have resulted from such overcharges.

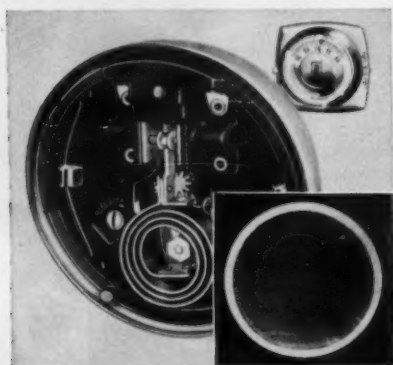
The full House Commerce Committee will act on the measure within a couple of weeks. It stands a good chance of clearing both houses of Congress.



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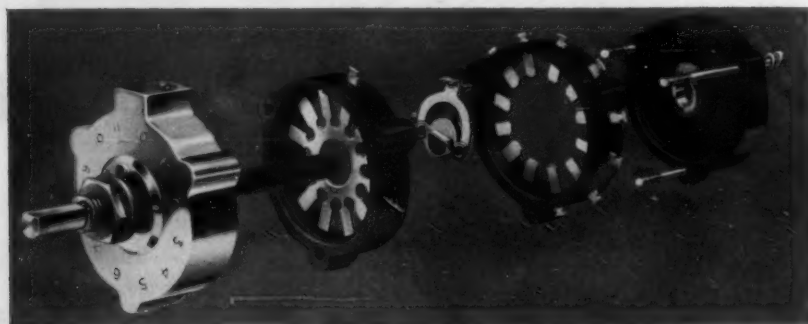
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Profit Pinch Viewed With Increasing Anxiety

New York—Price analysts are viewing the continuing profit squeeze with growing concern. The feeling is that current razor-thin margins aren't nearly enough to absorb scheduled boosts in wages and other expenses, and that pressure for price boosts will increase.

Just how tight profit margins are is highlighted by a new report just released by the Federal Trade Commission and the Securities and Exchange Commission. It shows after-tax rates of return perilously close to the postwar lows.

Moreover, it reveals the tremendous ground that must be made up before margins again approach late 1959 or early 1960 highs. Thus, manufacturers, at latest report, only managed to earn 3.5¢ on each dollar of sales—some 25% below the performance of a year ago (see chart at right).

Drop in Stockholder Equity

An even sharper decline is apparent in the rate of return on stockholders' equity. Currently, a dollar of equity brings only 6.8¢ in return—a significant 30% below early 1960.

Some analysts, however, think that the situation isn't quite so bad as it looks on paper. They point to the fact that part of the profit decline in recent months can be attributed to accelerated depreciation write-offs.

These people argue that depreciation (which is charged off as a cost) is not the same thing as, say, a wage expense, for the money charged to depreciation is retained in a special fund—and is therefore available to the corporation as additional cash.

But even if depreciation is taken into account, it still doesn't explain the extent of the current margin declines. As one top business economist told PURCHASING WEEK: "No matter how you slice current figures, you wind up with the inevitable conclusion that a lot of firms are going to have to boost prices to stay out of the red."

Pattern Already Apparent

This pattern is already pretty apparent. Thus, earlier this year glass container suppliers, despite keen competition, were forced to hike prices 3%-5% in response to substantial wage increases and dwindling profits.

More recent examples of such price increases can be seen in electronic goods, dyestuff intermediates, asphalt floor tiles, and various brass products. Profit squeeze was behind the upward adjustment in all of these areas.

Even the recent boost in nickel can be traced back to lower profit. According to International Nickel Co., the firm over the past four years (or since the last price hike) had been forced to absorb cost increases amounting to \$50-million.

Postwar Profit Trends

A study of long-range trends in profit margins of other industries may also give hints on where pressure for price boosts may be growing. Eliminating the effect of cyclical variations (which tend to reduce margins in downturns and raise them in boom times),

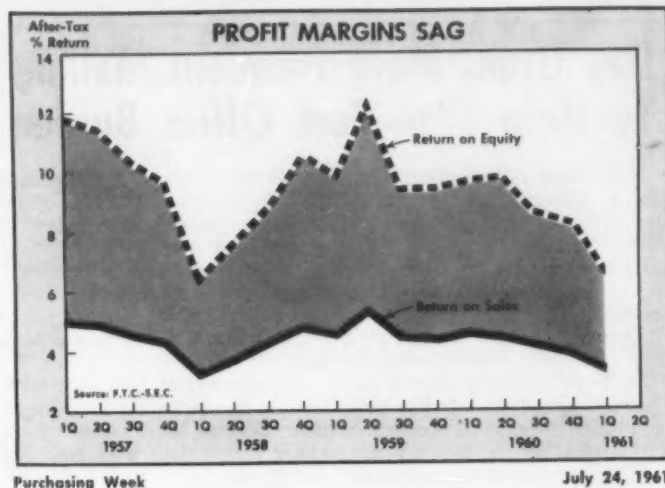
here's how postwar profit trends shape up:

• **Industry.** The downward drift in margins is most pronounced in primary metals, machinery, paper, and building materials. On the other hand, industries like chemicals and instruments seemed to have weathered the profit squeeze fairly well over the past decade.

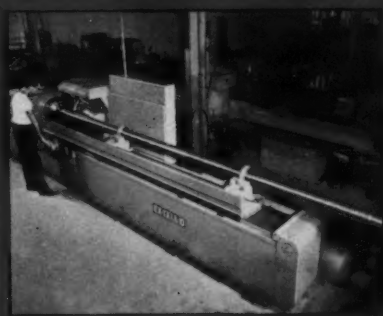
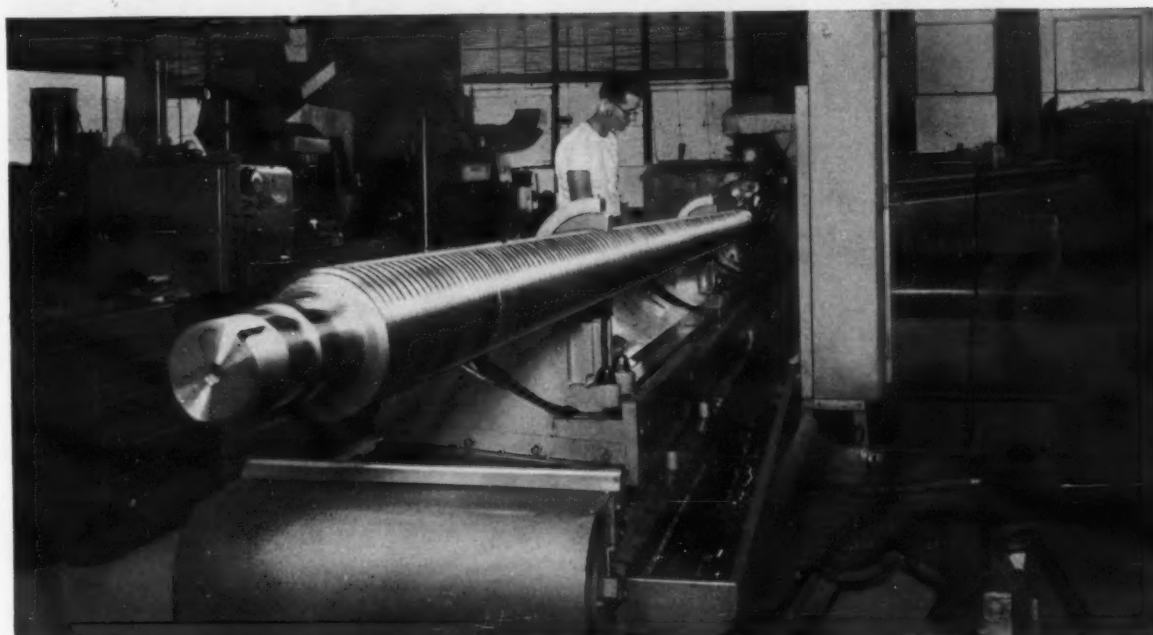
• **Size of firm.** Profit margin

trends have also tended to vary by size of firm. Generally speaking, the smaller the firm the poorer it has fared over recent years.

For example, firms with assets of from \$1-million-\$5-million show a substantial 71% drop in profits per dollar of sales over the past year. That's in sharp contrast to the industrial giants—firms with assets over \$1-billion—which showed only a 10% decline in margins.



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Day Urges More Frequent Mailing To Help Ease Post Office Burden

New York—Postmaster General J. Edward Day has asked the nation's larger users of postal service to spread their mail more evenly throughout the day to permit an improvement of service.

Day made his request at a meeting of the newly organized New York Citizens' Postal Advisory Committee. Similar units have been formed in more than 250 cities across the country.

He noted that of the more than

65-billion pieces of mail handled annually by the post office, about 80% is processed between 5 p.m. and 8 p.m.

"What we have in mind," Day said, "is a systematic voluntary rescheduling of mail deposits . . . so that there will be no 'peak load.'"

In other words, said Day, service can be improved if businessmen deposit mail when it is ready rather than wait until the end of the day.

Creating Right Image Cited as Top P.A. Challenge

Fort Worth—One of the great challenges facing the purchasing profession today is creating the proper image of the P.A. as an individual and of NAPA as an association — and pinpointing the public to whom these images are to be presented.

Paisley Boney, NAPA's national public relations chairman, analyzed this and other problems facing the association at the annual Dist. 2 Committee Workshops held here July 14-15.

Boney told the local and district chairmen that close co-operation between them and the

national organization is essential if NAPA is to achieve its goals.

Dist. 2 is the first to hold its annual committee workshops. The district added two more firsts this year when it combined the committee workshops with the officers' workshop and expanded the officers' group to include first vice presidents.

"This should give us a much better working organization," a district official told PURCHASING WEEK. "In the past, the committee chairman went home from the workshop full of enthusiasm, then had to try to

transmit this enthusiasm to his president, since the officers' meeting was always held at a later date."

Marshall H. Edwards, from NAPA's New York office, told delegates that improved communications between the local and national offices are a major goal this year. He said more assistance will be available from headquarters, including packaged programs.

Two professionals in the field were brought in by district Public Relations Chairman Edwin Ruthven, Republic National Bank of Dallas, to speak to his group. The P.A.'s got pointers from L. D. Webster, director of public relations for Lone Star Steel Co., Dallas, on "publicity vs. notoriety vs. anonymity," and Dallas Chamber of Commerce Publicity Director Tom McHale, gave specific examples of the types of copy and pictures trade, business, management, and purchasing publications do and do not want.

The professional development group was headed by district Chairman W. B. Brown, Jr., Acme Brick Co. and Value Analysis-Standardization Chairman was R. C. Fast, Pan American Petroleum Co., both of Fort Worth.

'VASCOgrams'

The Pro-D group studied ways of providing association members with tools and information for self- and job-improvement, and means of stepping up work with schools and colleges. VASCO chairmen concentrated on preparation of programs and seminars useful to individual associations, and presentation of "VASCOgrams," their new term for "quickies."

One of the speakers at the final joint session, Dr. Kenneth Cox, said increased contact between purchasing faculty and association members would do much to further the cause of purchasing as a profession. Dr. Cox, who teaches purchasing at North Texas State College, Denton, suggested this might be done by asking professors to perform some service or research for the association and by setting up internships for instructors in purchasing departments. He also recommended holding meetings on the college campus and working with students to give them a favorable impression of the purchasing profession.

Urges Special Groups

District Secy.-Treas. Fred D. Bradley, Southern Union Gas Co., Dallas, spoke for the officers. He recommended that locals with enough members set up such special groups as distributor or petroleum buyers. The Houston association has gone a step further, he said, and has formed a committee on governmental affairs.

Bradley announced that the Houston association is compiling a manual of duties of officers and committee chairmen. It is the first association to put this in writing and the material will be made available to other associations when completed.

Some 60 delegates representing 11 chapters attended the two day session, which was presided over by Dist. 2 Vice Pres. Chris L. Maier, Lone Star Steel Co., Dallas.



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Congress Considering New Bills To Stiffen U.S. Antitrust Statutes

Washington — New Legislation which would stiffen the antitrust laws went into the Congressional hopper last week.

Rep. Emanuel Celler (D-N.Y.) and Sen. Estes Kefauver (D-Tenn.) each introduced four identical bills which would:

- Increase the fine for violations of the Sherman Act's original provisions to \$100,000 from \$50,000 and, on a second offense within 10 years, raise the corporate fine to \$500,000 and add a mandatory one year jail sentence for individuals.

- Set forth price fixing and division of markets as especially flagrant violations of the Sherman Act and put penalties for these offenses up to \$500,000 for corporations and \$100,000 plus a year in jail for individuals.

- Raise the penalty under section 14 of the Clayton Act for corporation officials involved in price fixing from \$5,000 to

knowledge of illegal activities or has reasonable cause to know they are taking place; he has the authority to stop them or has access to a higher official who could stop them; and he fails to exercise this authority. This would accomplish one complaint Sen. Kefauver has had about the electrical cases: He believes that top corporate officials of the companies should have been punished for antitrust violations by their underlings.

Westinghouse Seeking Stronger NEMA Code

Pittsburgh — Westinghouse Electric Corp. moved to put teeth into a "statement of principles" on antitrust law compliance adopted by the National Electrical Manufacturers Association.

In a letter to the association, Westinghouse President Mark W. Cresap, Jr., called for "prompt development of appropriate implementing procedures" for the code and a provision that continued membership in National Electrical Manufacturers Association be "predicated upon ac-

ceptance and support of these policies and principles."

Members of association now are free to follow the principles or not, as they choose.

A key provision of the seven-point code concerns pricing. It allows each industry member to "determine independently the prices to be charged for its products, and all terms and conditions of sale."

"Any agreement or understanding among competitors, whether written or oral, concerning their prices or price policies

or terms of sale, is a violation of this statement of principles, and an act of business immorality," the provision says.

"The single exception," the code says, "is a good faith negotiation for an agreement of purchase or sale."

The code also requires that each company "jealously guard its freedom and independence in marketing and pricing its products and to take care to see that it does not abdicate its authority and responsibility to any competitor."

More Damage Suits

Philadelphia—Twelve more civil damage suits were filed by the city in U.S. district court here against 17 manufacturers of heavy electrical equipment who pleaded guilty or no defense earlier this year to charges of price fixing and bid rigging.

Seven suits cover city purchases from 1956 through 1960. The other five were filed on behalf of the city-owned Philadelphia Gas Works for purchases in the same period. The purchases covered a wide range of power equipment.

The city said it will begin taking depositions Sept. 18 from officials and former officials of five companies named in two earlier suits filed last month. These suits were against manufacturers indicted for price fixing on switchgear.

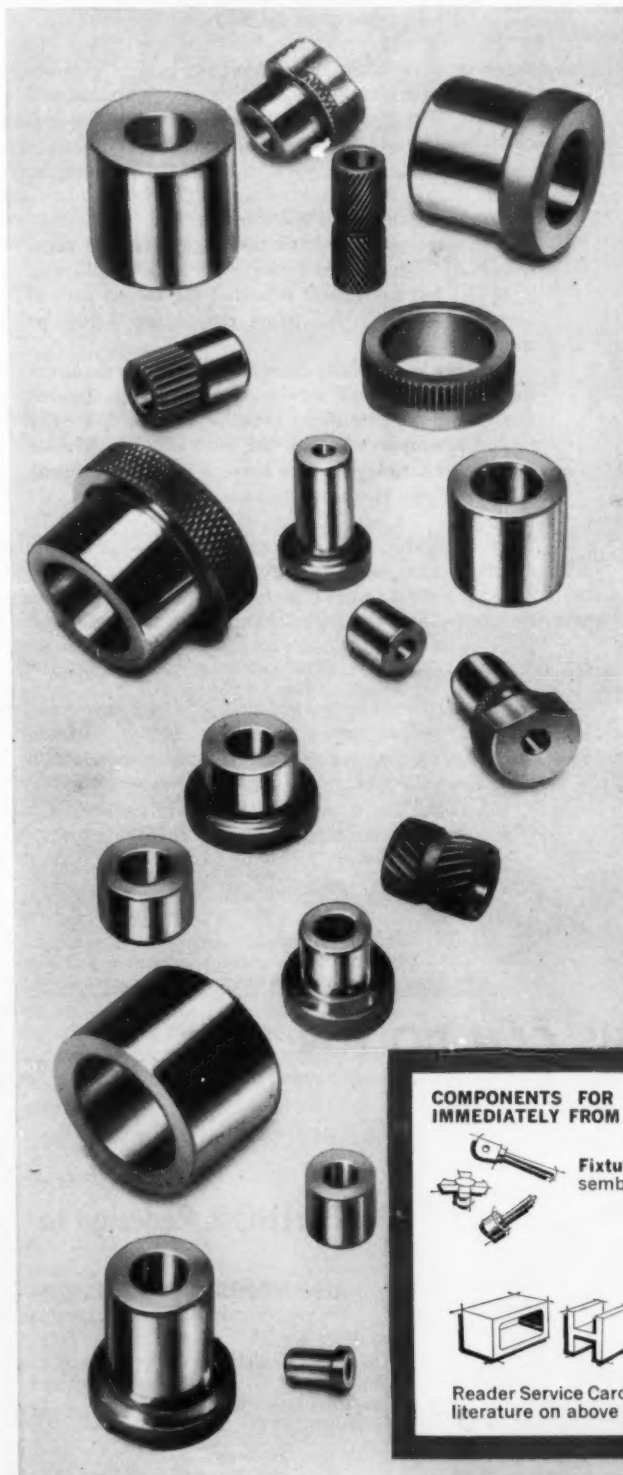
\$100,000 and include within this law any executive who "ratified" an illegal action.

- Require bidders on government contracts who within the previous two years had submitted identical bids to certify that the bids were reached independently.

The proposed laws reflect strong reactions by Rep. Celler and Sen. Kefauver to the Justice Dept.'s far-reaching price fixing charges against the electrical industry. Sen. Kefauver feels that present antitrust penalties are not sufficient to cause corporate violators any real worry.

It is significant that in the second bill, which deals specifically with price fixing and division of markets, the language specifies both product and geographical markets. This is a departure from present Sherman Act language which forbids "restraint of trade or commerce among the several states." The definition of this phrase to mean product markets as well as geographic markets was developed in the Bethlehem Steel-Youngstown Sheet & Tube merger case which the Justice Dept. successfully attacked in the courts.

In the third bill, a corporate official is defined as "ratifying" illegal activities when he has



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Management Memos

The Company Parking Lot

An employee parking lot can create more company problems than it solves if it's not properly administered, according to the National Industrial Conference Board. Without careful planning on such matters as space allocation, parking regulations, and lot security, the NICB warns in its publication, *Management Record*, headaches will begin to pile up—even before the traffic marking paint is dry.

The most difficult part of the job of setting up a new lot, according to NICB, is figuring out a way of assigning parking spaces to personnel without hurting too many feelings. Company policies on this matter vary all over the lot. Some firms prefer to assign all the spaces on the basis of rank; others on a first-come, first-serve basis. One firm reports that it reserves the choicest spots for drivers with the best safety records, while another saves the preferred spaces for salesmen who are in and out of the plant at odd hours. An aircraft firm, on the other hand, holds out the choice locations for share-the-ride and pool cars, on the theory that this will tend to reduce the number of autos to be parked.

To smooth the flow of traffic, many firms have set up rigid regulations with penalties for violators. One company even issues a violation ticket that the lot attendant puts under the offender's windshield wiper. Generally, first violators get a warning for parking misdemeanors, but continued violations may lead to loss of parking privilege, removal of car from the lot, loss of pay, and—in some cases—to dismissal.

Many companies also have expanded their parking service facilities to keep their employees happy. At a recently built plant, for example, one company provided room on the parking lot for a commercially operated service station. Other companies with parking areas have arranged for a neighboring service station to pick up the cars of employees in the morning, service them during working hours, and return them at quitting time. Other services provided at company lots include removing potential tire hazards from the road, furnishing tows for stalled cars, and providing car washes in the company garage.

Employee Turnover

Low turnover in personnel can be just as bad as a high turnover, according to a survey by the research department of the Assn. of Casualty and Surety Companies—that is, if it's based on lack of employee drive or too much company paternalism.

"Some turnover is desirable. It brings in new blood and eliminates the inefficient and is a strong clue to the quality of general supervision," says Raymond D. LaCombe, manager of the research department of ACSC.

The idea of the survey, which covered over 100,000 employees in more than 50 companies, was to give management a picture of healthy turnover through comparative figures. Results show that the average turnover rate in the insurance companies polled is 31.1% as compared to 40.4% in manufacturing industries, and 31.6% in nonmanufacturing firms.

Other highlights of the survey:

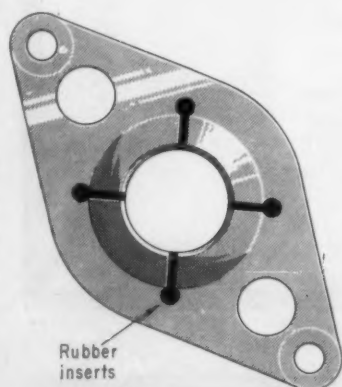
- Female workers have the largest rate of turnover—41% compared to 16% for male employees.
- The big companies reported the lowest rate of turnover—29.6% for firms employing 3,000 or more.
- There is a definite correlation between turnover rates and length of service. For example, figures show that the first three months and the 1-2 year period of employment are the most critical. Almost half of the employees who leave a job (or are fired) fall into these two time periods.

"Proper supervision, a thorough job and wage administration program, good internal communications, and competitive employment benefit programs can play important roles in properly controlling turnover," the report concludes.

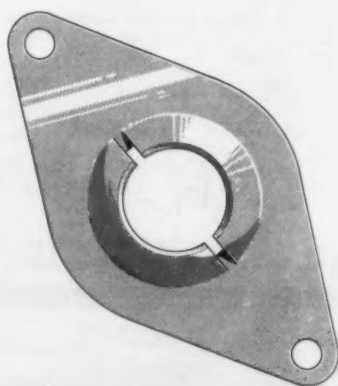
Short Pointer

The higher education, particularly at Ivy League colleges, pays off, as a recent survey of Yale's class of 1936 shows. The men of '36, who set out to seek their fortunes in that depression-haunted year, now enjoy an average annual income of \$50,000, compared to an average family income of almost \$7,000 for the entire country. Total savings exceed \$82-million, which averages out to about \$150,000 for each of the 552 class members covered by the survey.

WHAT VALUE ANALYSIS CAN DO FOR YOU



BEFORE ANALYSIS: Friction shaft lock was machined from solid stock (milling, turning, drilling, and slotting). Rubber inserts were molded in.



AFTER ANALYSIS: Part was redesigned as a stamping and punched to final shape from flat stock. All machining and need for rubber inserts were eliminated.

Source: Sperry Gyroscope Div., Sperry Rand Corp., Great Neck, N. Y.

METHOD: Redesign to use volume production techniques.

SAVINGS: Part cost cut 98%

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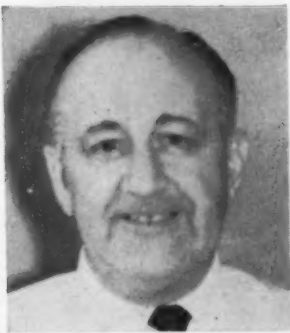
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Purchasing Week Asks

How would you handle the salesman who asks for business on the basis of 'Buy American'?



I. G. Bromberg, director of purchases, Universal Mfg. Corp. (transformers), Paterson, N. J.:

"When this is used by a salesman, it is an admission that his product is not competitive with foreign manufacturers. With the fierce competition and the American way of free enterprise, it becomes mandatory for purchasing departments to buy at the best price from satisfactory suppliers wherever they are. Savings in production cost must be accomplished in the face of present day industry trends. Let the outside competition serve as an incentive to our own manufacturers to review their costs and make economies down the line."



J. R. Novotny, president and purchasing agent, Lake Erie Pipe & Supply Co., Erie, Pa.:

"This is no problem for us because as a matter of policy, we prefer to 'Buy American' and are not at all receptive to imports. All the reports that we have had on imported material in the past few years have been anything but gratifying. Reports such as tubing being out of round and not having a uniform wall thickness, casting flash not machined from valves, etc., are not conducive to good customer relations. Furthermore, we like the American way of life and so will support American-made products."



M. W. Ryan, purchasing agent, Cla-Val Co. (automatic valves, etc.), Newport Beach, Calif.:

"I do not recall having been approached by a salesman on this basis. This may be due in part to the fact that in conversations with salesmen and in our purchasing manual we clearly outline management's views on this subject. We firmly believe in buying American for several reasons. We believe the quality of American materials and finished goods cannot be surpassed anywhere in the world. We believe that to assure our standard of living we must buy American—it will maintain high employment and create new jobs."



K. J. Albrecht, production manager, Scott Aviation Corp., Lancaster, N.Y.:

"While we have never been faced with this situation in a direct way, I am sure we would welcome these salesmen because we believe it would be to our best interest. On several occasions we have received calls from New York City offering foreign market metals and facilities. While there was a slight price advantage in certain instances, we would sooner 'Buy American.' In addition, much of our work is controlled by military and/or governmental regulations which pretty much compel us to purchase domestically."



C. E. Bailey, purchasing agent, Orbit Valve Co., Tulsa:

"We purchase material to close physical and chemical specifications and feel that it is far better to deal with suppliers in this country. Therefore, the 'Buy American' basis would have no bearing on our buying policy. Sales appeal would be derived from vendor reliability, quality, ability to deliver, and prices competitive with other domestic suppliers."

Next week—July 31

Six purchasing agents answer this question:

Do you feel purchasing gains or loses stature in a materials management setup?

Suggest a Question to: PURCHASING WEEK Asks
330 West 42 St.
New York 36, N.Y.

Follow-Up: Letters & Comment

Product Guide Helpful

Hibbing, Minn.

We find ourselves in the market for an office copying machine at this time. Your product guide for March 6, 1961 was found to be very informative ("Data to Help You Make the Right Move When You Buy Office Copying Machines for Your Company"). Congratulations on a good subject well edited.

Arthur I. Foster
Secretary
E. W. Coons Co.

● Reprints are still available.

Basic Materials

Syracuse, N. Y.

In reference to PURCHASING WEEK'S "Industrial Materials Price Barometer," it would be valuable if you would advise

what the 17 basic materials were that made up the original base in January 1958.

F. O. Spaid
Manager—Materials
Television Receiver Dept.
Radio & Television Div.
General Electric Co.

● The commodities in the index include: burlap, copper scrap, cotton, hide, lead scrap, print cloth, lead, shellac, tallow, aluminum scrap, rosin, rubber, steel scrap, tin, wool tops, zinc, and copper.

To Our Readers

This is your column. Write on any subject you think will interest purchasing executives.

Send your letters to: "Follow-Up,"
Purchasing Week, 330 West 42nd St.,
New York 36, N. Y.

UNCOMMON CLOTH

UNCOMMON METALS

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GOLD-SOLID
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And not only do we weave mesh cloth in these metals to order but we carry some items in stock. We also fabricate inserts, strainers and other parts to order, utilizing our own 'uncommon' mesh cloth.

Why not phone us—Newark, N. J. HUmboldt 3-7700—regarding your requirements for wire cloth made of an uncommon metal? It will expedite matters and we might be able to help you in your selection.

As background for this kind of work, we can point to more than fifty years of wire cloth making, during which time we have made cloths of practically every metal that can be drawn into weavable wire.

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P/W Reports on Resale Prices

Used Equipment Sales Continue Brisk; Wide Range of Prices Being Recorded

New York—It's an unusual summer for industrial equipment auctions. As a rule, sales slacken off during the hot months, but not this year activity has been remarkably brisk, with the number, variety, and quality of industrial auctions approaching winter peaks.

Prices continue to show wide divergence, with late-model precision machine tools bringing higher-than-ever tags and pre-World War II items close to rock-bottom.

The market for milling machines, which fell off quite a bit a few months back, has picked up considerably in recent weeks. However, turret lathes and metal fabricating equipment are not moving well. Sales of used construction equipment have picked up again and are bringing top prices.

Biggest drugs on the resale market at the moment are old lathes and wood-working equipment. The latter is reported to be going at very low prices, especially on the West Coast, where the furniture industry has been hard hit.

Probably the best buys of the summer, so far, were chalked up at Industrial Plants Corp.'s recent Miami sale (sample prices listed on this page), when a seven-year old Bliss OBI press went for \$2,300, and a three-year-old Wysong & Miles power squaring shear for \$5,000.

The reason: Miami is a long way off the beaten metalworking path, and buyers from Northern industrial areas would have to reckon with a sizable freight bill. But local shops reportedly cashed in on one of the prime machine tools buys of the year at Industrial.

Grob NS24 bandsaw. \$1,100.
Van Norman 26 universal miller, new 1953. \$4,550.
Two Bridgeport 1-hp vertical turret millers. \$900 and \$1,000.
U. S. Multimill manufacturing miller. \$275.
Monarch 13 x 54-in. toolroom lathe, new 1953. \$5,750.
Monarch EE 10 x 20-in. toolmaker's lathe. \$4,600.
Dreis & Krump 408D power press brake, new 1951. \$4,700.
Wysong & Miles 1010RD 10 x 10 gage power squaring shear, new 1958. \$5,000.
Kellogg 20-hp 2-stage air compressor. \$1,250.
Buffalo 22 upright floor-type drillpress. \$375.
Norton No. 20 tool and cutter grinder, new 1954. \$1,750.

JUNE 6

Auction held at Lejohn Manufacturing Co., Clearfield, Pa. Auctioneer: Industrial Plants Corp., New York.

Federal No. 7 OBI press, 80-ton capacity, new 1952. \$2,000.
Reid 2B surface grinder, magnetic chuck. \$1,050.
Cincinnati 18 x 36-in. traytop lathe. \$2,250.
Invicta 24-in. shaper. \$1,850.
Wysong & Miles 1252 power squaring shear. \$1,000.
Royal 4810 power press brake. \$300.
Dries & Krump Model 181 4 x 10 power press brake, new 1952. \$950.
Bridgeport 1/2-hp vertical miller. \$750.
1956 Ford pickup truck. \$600.

MAY 25

Auction held at Pride Furniture Co., Los Angeles. Auctioneer: David Weisz Co., Los Angeles.

DeVilbiss 3-hp compressor (old). \$300.
Tannewitz heavy-duty table saw (old). \$185.
Davison Wells 5-hp table saw. \$250.
Multiplex radial saw. \$237.50.
Singer 111W-155 sewing machine. \$337.50.
Union Special 51330BH sewing machine. \$152.50.

MAY 25

Auction held at Hyde-Murphy Co., Ridgway, Pa. Auctioneer: Industrial Plants Corp., New York.

Berthelson Type 5010016 hydraulic hot plate press. \$11,000.
Raybond 5H high-frequency edge gluer, new 1957. \$11,000.
Hydraulic Press Co. 20-ton hydraulic veneer press. \$11,000.
Grace Fabri 2002 vacuum press. \$1,250.

Latest Auction Prices

JUNE 16

Auction held at Wunderlich Co., Palo Alto, Calif. Auctioneer: David Weisz, Los Angeles.

Lincoln 600-amp electric welding machine. \$900.
Gardner-Denver 2-stage 15-hp compressor. \$900.
Caterpillar D-8 tractor. \$20,000.
Caterpillar D-9 tractor. \$14,000.
Caterpillar D-9 tractor. \$14,500.
Hyster 15,000-lb. capacity fork lift. \$4,000.
International TD-24. \$10,000.
International TD-24. \$13,000.
International TD-24. \$15,000.
Caterpillar BW-20 scraper. \$13,000.
Caterpillar 120-kva diesel generator set. \$3,300.

JUNE 8

Auction held at Era Meter Co., Chicago. Auctioneer: Samuel L. Winternitz & Co., Chicago.

Rockford Model 6 1/2 S OBI press, 71 tons, 6-in. stroke (new 1951). \$3,250.
Walsh 38 X OBI press, 38 tons, 4-in. stroke, 2 1/2-in. horn hole. \$150.
L & J OBI press, 30 ton, 2 1/2-in. stroke. \$550.
Bliss No. 16 horn press, 15 ton, 2 1/2-in. stroke. \$150.
Consolidated OBI press, 15 tons, 1 1/2-in. stroke. \$190.
Famco OBI press, 12 ton, 1 1/2-in. stroke. \$190.
Manly 4-43 hydraulic arbor press, side ratchet, 30-in. between uprights. \$300.
Norton 26-F Hydrolap, 26-in.-dia. double surface, with wheel dresser. \$4,100.
Norton Model 20 UltraLap, 26-in. dia. double surface, wheel dresser. \$350.
Cincinnati 118 rise-and-fall production miller. \$1,900.
Bridgeport J vertical miller, slotting attachment. \$1,750.
Garvin No. 2 universal horizontal miller, vertical slotter. \$100.
Barker PM hand miller, new 1955. \$200.
Logan 11 x 25-in. QCG toolmaker lathe, 3 and 4-jaw chucks, lever action cross slide, new 1960. \$1,050.
Logan 10 x 25-in. QCG engine lathe, variable speed drive. \$300.
South Bend 10 x 24-in. QCG engine lathe, taper attachment, 3 and 4-jaw chucks, draw bar. \$800.
South Bend 10 x 25-in. QCG engine lathe, 3 and 4-jaw chucks, draw bar, follower rest. \$250.
Pratt & Whitney 16 x 36-in. engine lathe, 3 and 4-jaw chucks. \$110.
Bardons & Oliver No. 4, 2-in. capacity turret lathe. \$110.
Foster No. 3 turret lathe, 16-in. swing. \$140.
Logan 10-in. hand screw machine, cross slides, bar feeds. \$160.
Hanchett No. 2 snag grinder, 12-in. wheel, coolant pump. \$100.
Porter-Cable G8 wet-dry belt grinder, 8-in. vertical belt. \$300.
Snow DR 2-A drill, automatic cycle, new 1959. \$750.
Delta 2-spindle drillpress, 16-in. capacity. \$50.
Avey 2-spindle drillpress, 18-in. capacity (fair). \$20.
DoALL V-16 vertical bandsaw. \$1,100.
Buehler 1010 abrasive cutoff saw, coolant system, new 1955. \$300.
Thermonic 1500 15-kw induction heater (excellent). \$2,000.
American LD8 automatic spotwelder, 10 kva, water-cooled. \$145.
Hauser 241 internal and external pivot polishing machine. \$300.
Rockford 12-in. toolroom shaper, 10-in. vise. \$110.

JUNE 8

Auction held at 4000 N. W. 28th St., Miami, Fla. Auctioneer: Industrial Plants Corp., N. Y.

Bliss 28M OBI press, new 1952. \$7,500.
Bliss 21 1/2 OBI press, new 1953. \$2,300.
Niagara A3 1/2 OBI press. \$1,650.

Coming Auctions

AUGUST 8

Sale to be held on premises at 48 Bridge St., Brattleboro, Vt.

Woodworking machinery and machine shop equipment.
WRITE, WIRE, PHONE: Industrial Plants Corp., 90 West Broadway, New York City.

SEPTEMBER 12

William Freihofer Baking Co., Philadelphia.

\$1 Million evaluation—complete modern

bakery to be sold piece by piece.

WRITE, WIRE, PHONE: Industrial Plants Corp., 90 West Broadway, New York City.

SEPTEMBER 14

O. W. Siebert Co., Gardner, Mass.

Stamping equipment, brakes, shears, tool-room machinery. 108,000 sq. ft. of industrial real estate, including buildings, etc.

WRITE, WIRE, PHONE: Industrial Plants Corp., 90 West Broadway, New York City.

Diehl 900 electric tapeless splicer, new 1958. \$2,500.
Diehl 890 electric tapeless splicer. \$2,000.
Diehl self-feed glue jointer. \$4,250.
Black Bros. 52-in. glue spreader. \$1,450.
Black Bros. 48-in. glue spreader. \$700.
Capital 100-in. veneer clipper. \$300.
Louis Allis 20-kw frequency changer. \$275.
Yates 431 endless bed sander. \$850.
Curtis 43R3-DB-10 hydraulic automatic belt sander, new 1956. \$5,000.
Two Vonnegut 6-in. all-electric ball-bearing molders. \$3,100 each.
Whitney Model 37 50-in. single planer. \$4,700.
Powermatic 225 24-in. planer. \$1,400.
Whitney 24 30-in. double planer. \$1,600.
McDonough 54-in. left hand band resaw, new 1956. \$5,700.
Four Mattison 202 rip saws. \$2,100 to \$2,400.
Hermance 300 SC gang rip saw, new 1956. \$2,100.
Porter 43-36J crosscut saw. \$925.
Mereen Johnson double cutoff saw. \$1,550.
Jenkins 193 all-electric double-end tenoner, new 1956. \$22,500.
Greenlee 545 all-electric double-end tenoner. \$6,500.
Greenlee 502 single-end tenoner. \$2,500.
CKL powered door clamp. \$600.
Handy 4-jaw portable case clamp. \$1,600.
Greenlee 227PM hollow chisel mortiser. \$350.
Two Whitney 134 2-spindle shapers. \$200 and \$400.
Smith 24-in. self-feed jointer. \$650.
Lull Model T-10 Traveloader, new 1955. \$3,000.



PALLETIZED LAMPS: New materials handling technique developed by Westinghouse for shipment of fluorescent lamps is said to offer major labor savings, cut warehouse space by as much as 30%. Lamps previously available in cartons of 6, 12, and 24 lamps now can be ordered in palletized shipments in lots of 300 or more. Palletized load is basically one unit consisting of open-top cartons with corrugated cap which are stacked in layers, then steel-strapped to expandable wooden skids.

Industry News in Brief

Diamond Opens Terminal

McKees Rocks, Pa.—Diamond Alkali Co. of Cleveland has opened a river terminal here for distribution of high purity mercury cell caustic from its plant in Muscle Shoals, Ala., and Deer Park, Tex.

The terminal will service the Greater Pittsburgh area and other northeastern U. S. markets by rail tank car and tank truck. Faster delivery at nominal shipping charges are prime advantages of the new terminal, the

company said. Formerly, tank car shipments took two days, and tank cars four to five. The terminal will be operated by McLintic-Gordon Co.

Increasing Ammonia Output

New Orleans—American Cyanamid Co. will build a \$3-million addition to its anhydrous ammonia plant here, increasing capacity of the facility by 40%. The addition is scheduled for completion by late 1962.

DuPont Expands Plant

Richmond, Va.—Du Pont Co. said it will double the capacity of its polyethylene film plant here by the middle of next year. When the expanded facility goes into full operation the plant will be able to turn out more than 60-million lb. of the packaging film annually.

Flex-O-Glass Licensed

New York—Eastman Chemical Products, Inc., a subsidiary of Eastman Kodak Co., has licensed Flex-O-Glass, Inc., Chicago, to make and distribute Uvex plastic sheet. Flex-O-Glass will have facilities for producing the sheet, which is designed for the outdoor sign market, in widths of up to 72 in.

Merger Approved

Dallas—The merger of Ling-Temco Electronics, Inc., and Chance Vought Corp. has been formally approved by the stockholders of both corporations. The merger is scheduled to become effective Aug. 31. The combined company will be known as Ling-Temco-Vought, Inc.

Bell Opens Warehouse

San Diego, Calif.—Bell Electronics Corp. has opened a warehouse here to provide area customers with immediate delivery on all its product lines. The company already had a sales office here.

Hupp to Buy Hercules

Cleveland—Directors of Hercules Motors Corp., Canton, Ohio, have voted to sell the assets of their company to Hupp Corp. Hercules is one of the nation's largest independent producers of diesel, gasoline, and LPG engines. Hupp is engaged primarily in air conditioning, household appliances, and heating and refrigerating equipment.

WE to Expand Line

Pittsburgh—Westinghouse Electric Corp. plans to expand its already large line of refrigeration equipment by acquiring Thermo King Corp., Minneapolis, a manufacturer of cooling equipment for railway cars, trailer trucks, buses and missiles. The \$32.5-million transaction still must be approved by Thermo King stockholders.

Pentron Diversifies

Chicago—Pentron Electronics Corp. has diversified its line of products by purchasing Southern Electric, Ind., Hammond, Ind. Pentron makes magnetic tape recorders, air purifiers, and other electronic equipment, while Southern produces, distributes, and sells motor coils to the railroad and steel industries.

PROBLEM: How to get sales appeal in your shipping container without the cost of three-color printing.

SOLUTION: International Paper's new *pastel* Gator-Hide® linerboard gives you *three* colors with two-color printing.

THIS DISPLAY container was made with two-color printing—on one of International Paper's new Gator-Hide pastel linerboards.

These amazing new linerboards are the lightest and brightest you can get without printing color on expensive bleached board.

They are typical of the wide range of fine linerboards available to you in the famous Gator-Hide series. Their

purpose: *better packaging at lower cost.*

Other examples include non-abrasive boards, release-coated boards, weather- and slip-resistant boards and highly printable coated linerboards.

But our work goes beyond the creation of new boards. Packaging experts in our Container Division study the special needs of *your* product. They start with the best materials for the job. And then turn them into rugged—yet light-

weight—shipping containers that deliver your product in *top selling condition* at minimum cost.

International Paper can provide you with paper packaging that is designed—from the very beginning—to suit your product.

Call any one of our twenty-two Container Division plants. Or contact your boxmaker. He has probably been doing business with us for years.



INTERNATIONAL PAPER

NEW YORK 17, N. Y.

Manufacturers of papers for magazines, books and newspapers • papers for home and office use • converting papers • papers and paperboards for packaging • shipping containers • folding cartons • milk containers • multiwall bags • grocery and specialty bags and sacks • pulps for industry • lumber, plywood and other building materials

School for Strategists

This week's session of 'School for Strategists' takes you through the paces of making capital investment decisions using the medium of Operations Research Games.

Devised by P/W Consultant Martin L. Leibowitz, these exercises in disciplined decision-making teach you how to use the tools of Operations Research, herewith simplified to a set of convenient rules.

Sample Problem

You're a Purchasing Agent seeking bids on a certain type of materials, and you know that the more bids you get, the better price you'll receive from vendors who want your order. But it costs \$200 to process each bid, so the more bids, the higher will be the processing cost. Your problem is: How many bids should you ask to effect your greatest saving.

Here's the procedure to use in solving this problem:

(1) **What are you trying to do?** You're trying to decide how many bids you should ask for in order to effect the greatest possible saving.

(2) **What data do you have?** You know it costs you \$200 to

process each bid. You know, too, that if you invite only one bid, you'll be at the vendor's mercy. But if there's competition, you'll get a better price. So amassing all the price data you can get, you come up with these estimates of savings: \$500 if two vendors bid; \$850 if three bid; \$1,100 if four bid; \$1,200 if five bid; \$1,300 if six bid.

(3) **Arrange this data in an orderly fashion.**

Bids Solicited	Savings
1	0
2	\$500
3	\$850
4	\$1,100
5	\$1,200
6	\$1,300

(4) **Now find the variables.** They are: the number of bids, the amount of the savings, and the cost of processing. As the number of bids increases, so does the amount of money saved—and so does the cost of processing the bids.

(5) **What are your alternate courses of action?** In this case, they are the number of bids you can ask.

(6) **Now, formulate a mathematical sequence.** You've already done part of this in Step 3; what you have to do now is add two more columns—one listing the cost per bid and the other giving the net savings, i.e., Column 3 subtracted from Column 2. Like this:

Number of Bids Asked	Savings on Purchase Price	Cost of Processing	Net Savings to Firm
1	0	\$200	-\$200
2	\$500	\$400	\$100
3	\$850	\$600	\$250
4	\$1,100	\$800	\$300*
5	\$1,200	\$1,000	\$200
6	\$1,300	\$1,200	\$100

And there's your answer (starred). You should solicit four bids because that's your point of greatest net savings, \$300

(\$1,100 savings on material less the \$800 cost of processing). If you solicit fewer or more bids, the cost of processing them will eat up more of the material savings and give you a smaller net.

Now, try the two following problems on your own.

Problem I Modernization Plans

Waypoint Mills, Inc., is badly in need of modernization. A consulting firm called in to study the problem, has suggested three plans, each involving a different level of modernization. The capital costs required by the plans are:

Plan No.	Capital Cost
I	\$800,000
II	1,000,000
III	1,300,000

Each plan is designed to provide a production rate of 1,000 Waypoints per month. For this level of production, the over-all monthly operating costs of the mill after modernization would be:

Plan No.	Operating Cost
I	\$20,000
II	18,000
III	16,000

One of the major problems is the difficulty of raising the capital to pay for the modernization. Because of this, Waypoint management has decided to follow whichever plan will yield the greatest return on investment within the period of a year.

If the Waypoints sell at a price of \$50 per item, which modernization plan should be accepted?

(Answer on Page 28)

Problem II Factory Design

The Diamond Whirlpool Corp. wants to build a new, modern factory for one of its most profitable divisions. An exhaustive series of design and layout studies has shown that a large plant with more sophisticated material handling equipment will increase the efficiency of the factory significantly. But, of course, the capital investment costs also will be increased.

Four designs are being considered. Analysis shows that the estimated monthly operating costs for a production rate of 100 items per month under each design are as follows:

Plant Design No.	Operating Costs
I	\$26,000
II	18,000
III	17,000
IV	14,000

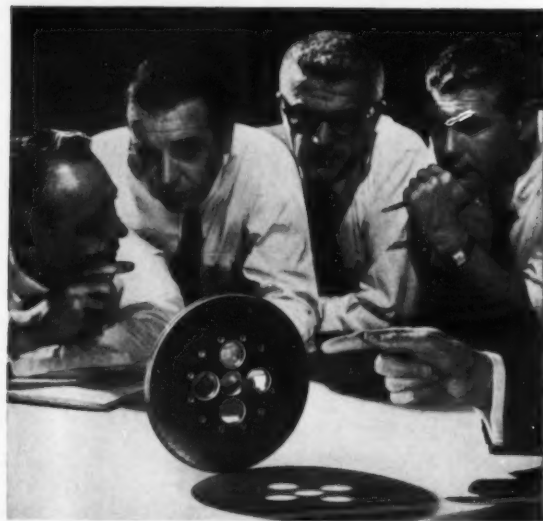
The capital costs of construction and equipment for each of these plant designs was also estimated:

Design No.	Capital Costs
I	\$1,400,000
II	1,600,000
III	2,000,000
IV	2,500,000

If the company decided to amortize these capital costs over a 10-year period, which plant design would be best?

(Answer on Page 28)

EXPERT Help in Laminated Plastics From Specialists



An Example of Synthane You-shaped Versatility

Do you have a materials problem? Perhaps laminated plastics is the answer: Why not discuss it with our field representative in your territory? He has behind him the entire Synthane organization with over 32 years of experience in the manufacture and fabrication of laminated plastics. Our engineers, technicians and field representatives are specialists in this field, and over two-thirds of our people have over 10 years' experience with Synthane. The solution to your materials problem can probably be found at Synthane.

You-shaped Versatility makes Synthane a Better Buy in Laminates



Synthane Corporation, 8 River Rd., Oaks, Pa.

Gentlemen:

Please send me information relating to Synthane as a source for laminated plastics materials and parts.

Name _____

Address _____

City _____ Zone _____ State _____

How a P. A. Would Handle Castro

(Continued from page 1)

beginning that, as President, he bears full responsibility for the events of past days."

There is a fine, courageous ring about this statement. But I think it fair to observe that it also served to put a quietus on a prompt bum's rush for those who managed the Cuban invasion debacle. And ex-President Eisenhower gave a large assist in the same direction when, with reference to those who wanted those who botched the Cuban adventure drummed out of the corps of bureaucrats, he said, "The worst possible development now would be to start witch hunting. Let's not do that by any manner or means." As near as I could determine, the idea back of this entreaty was that, in the face of the enemy, we should stand behind our commanders even if they are dopes.

Now let's see what we've got here. For better or for worse, and I don't argue for worse, we've got a presidency of the United States from which the incumbent, unlike the Prime Minister of Britain, cannot be fired oftener than every four years. When Anthony Eden, as Prime Minister of Britain, gave a go-ahead to the mismanaged and backfiring Franco-British military invasion of Suez in 1956 (a worthy predecessor in its dismal line of our Cuban operation) it was only a matter of weeks until it was announced that his health had failed to a point where he must resign. The official reference was to his physical health, but his political health also was decisively propelling him to the same result. But in the U. S. A. the President has a four-year tenure about which, of itself, I certainly don't complain.

Along with this we have a cold war which, if we manage to escape blowing up the world with hydrogen bombs in the interim, is going to be with us for years to come. And being with us it will continuously provide a case against "witch hunts" that might weaken the solidarity of our supports of our leaders.

What this seems to me to add up to is a marvelously thick and durable protective coating for governmental incompetence against reasonably prompt uprooting.

This, it suddenly occurred to me, may make me sound as though I am in favor of "witch hunts." Well, if a "witch hunt" were to consist of locating those responsible for a catastrophe such as the Cuban invasion and promptly and conspicuously relieving them of any opportunity to provide a repeat performance, then perhaps I am. In fact, it could be that the development of efficient machinery to remove governmental stumble bums is perhaps even more important to our success in the cold war than getting to the moon first.

Note on governmental largesse: People who are over 70 years old and/or blind get free fishing licenses in the State of New York. The State proclaims this generosity in its official circular about fishing and licenses to try to catch them.

U.S. Rejects Identical Bids, Nets Lower Quotes

Washington—Last May the Interior Dept. rejected bids on 14 schedules of power transmission equipment because 15 bidders submitted identical prices. About 70% of the bids were identical.

New bids on this equipment have been opened, and Interior Secy. Stewart L. Udall said last week that this time only around 17% of the bids received were identical, while prices on some of the re-advertised bids dropped as much as 10%. The department's squawking about identical bids, Udall feels, has done some good, and he indicated it will continue to reject them.

Materials involved in this bidding were steel reinforced aluminum conductors, suspension-type insulators, and hardware for suspension assemblies. These items will go in the Bureau of Reclamation's transmission lines to be built in the California Central Valley project and the Colorado River storage project.

The principal procurement item in the offering was for the Glen Canyon-Shiprock transmis-

sion line in the Colorado project. "Where before we had received identical bids from all nine bidders, eight bids were received in the new bidding and none was identical," Udall said. "Six of the eight bids also were below the previous identical bid figure in unit cost."

The drive against identical bidding is troublesome to both government procurement officers and suppliers. It is based on the assumption that identical bids indicate prices are reached non-competitively. Many government

officials believe that with more competitive bidding on materials prices would be lower. And the Interior Dept.'s experience on the re-advertised bids tends to bear this out.

But there is nothing illegal about identical bidding, and manufacturers contend it is simply the result of list prices being quoted on stock items. Many federal procurement officers claim this practice defeats the purpose of secret bidding on government jobs even though there is no law forbidding it.

Chrysler Tags Goodyear, Goodrich As Tire Suppliers for '62 Models

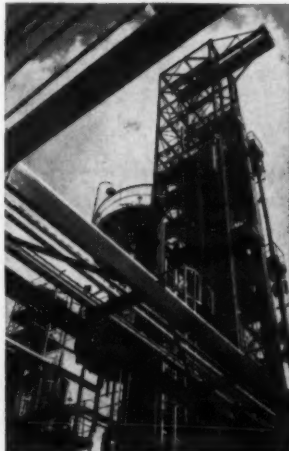
Akron—Chrysler Corp. has indicated that it will have two tire suppliers for its 1962 models, splitting the account between Goodyear and Goodrich, with Goodyear continuing as holder of the lion's share of the business.

None of the principals would reveal how the account, the third largest in original equipment, would be divided other than to indicate that Goodrich's share will be "small."

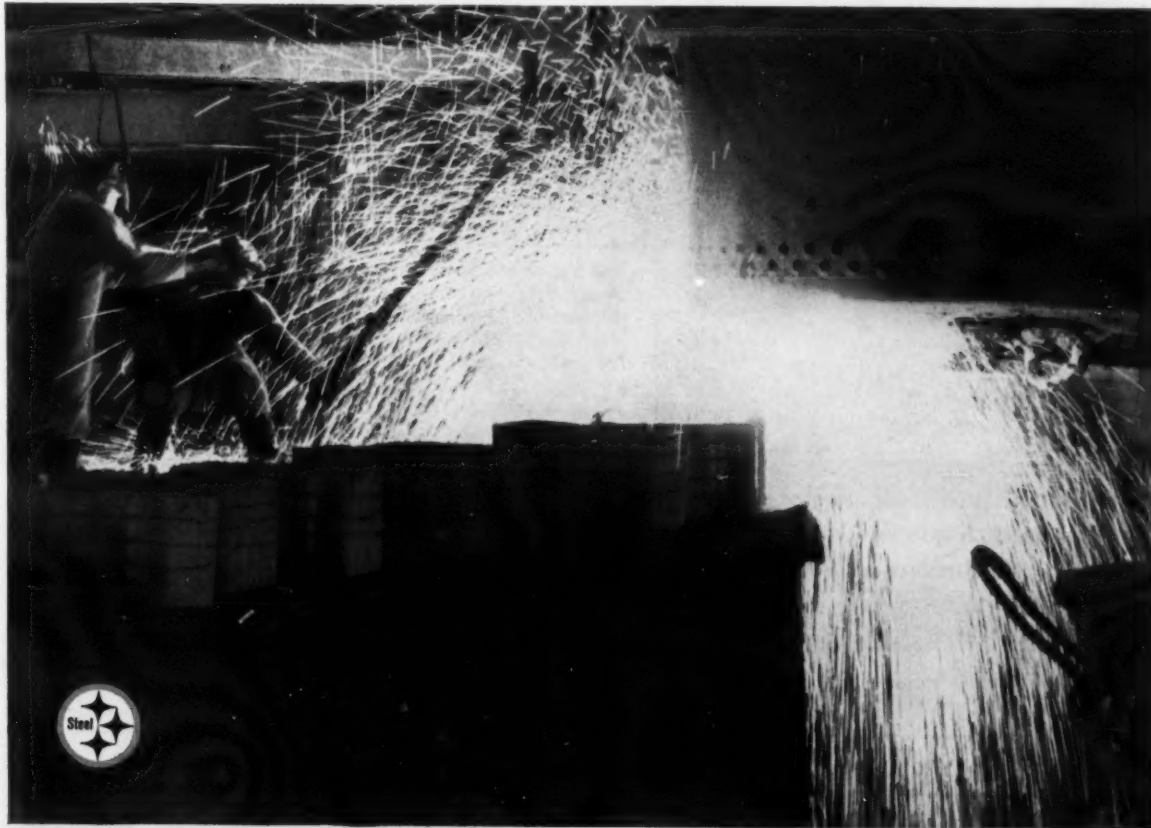
Chrysler has been the only major company in the auto industry with a single supplier of tires. Both Ford and General Motors have had a long-term policy of buying from varied sources.

Goodyear now is the only tire maker supplying some tires for all five auto companies since it landed what has been described as a "small" percentage of the General Motors business last year.

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Okla. Natural Gas Case Seen as Initial Test For Kennedy FPC Appointees

Washington—A test of the attitude of President Kennedy's new appointees on natural gas producer prices is in the making. An examiner for the FPC, Robert M. Weston, has handed the commission a recommendation that it allow Shell Oil Co. to charge 20.5¢ per thousand cu. ft. for gas in an area of Oklahoma where the FPC has set a ceiling of 15¢ per mcf.

The sale by Shell to Panhandle Eastern Pipe Line Co. involved gas from the Elk City field, which Weston described as "the most desirable single source of gas available in the U. S. today."

Weston argued that the advantages to Panhandle in having the supply justify breaking the price ceiling previously imposed by the commission. The reactions of commissioners Joseph C. Swidler and Howard V. Morgan, both Kennedy Democrats, and Lawrence J. O'Connor, who has been nominated to the FPC and may be in office when the case is decided, will be closely watched by both producers and consumer interests.

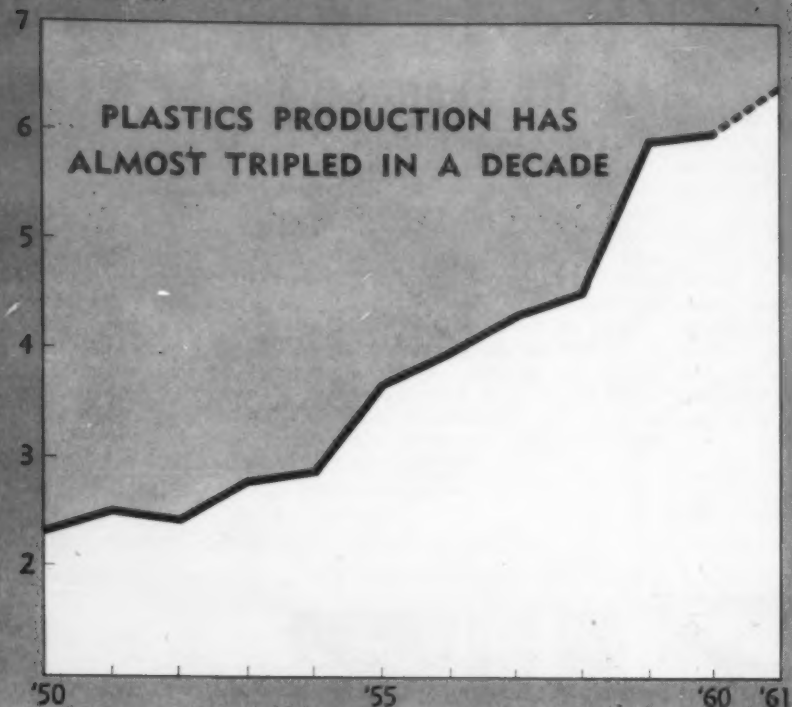
New Masonry Block Set For National Distribution

Pittsburgh—Shopping Centers, Inc., is planning nationwide distribution of a new patented masonry block said to cut masonry costs in construction work by 35%.

The block has tongue-and-grooves on all four sides. A mastic adhesive, applied between each row by caulking gun, replaces the use of mortar. Two men, working together, could lay about 3,000 blocks in an 8-hr. day, it is estimated.

The block has four walls and three air chambers and weighs less than 9 lb. Plaster can be applied directly to the interior wall without furring and one model has a lap-siding exterior wall that can be painted to resemble wood siding.

Production
(billion lbs.)



Fast-Paced Growth of

Plastics producers and fabricators are stepping up efforts to expand existing markets and win new ones in order to keep up the frantic growth pace the industry has set in recent years. Boasting a wide assortment of new resins (and the machines to form them) the plastics people are trying harder than ever to convince users in almost every industry that the new materials have a place in every product line.

The big volume industries—construction, appliances, transportation, and packaging—are the main target, and it's easy to see why. For example: 25 lb. of plastic used in the average car today—up from 8 lb. in 1950—make a 150-million lb. market (in a 6-million car year). And the switch to high density polyethylene for detergent bottles has already blossomed into a 50-million lb./yr. market.

Over 30 Families of Plastics

There are over 30 different families of plastics on the market today, and variations within the major groups push the total types available up into the thousands. Some are brittle, some flexible, some hard as steel—a user can find one plastic that has almost any desired set of characteristics. A DuPont scientist recently went one step further and predicted that the day will come when producers will be able to tailor plastics routinely to fit any customer specifications.

Polyethylenes led the plastics parade last year with an estimated production of 1.3-billion lb. Two other plastics—vinyls and polystyrene—were in the billion-

HOW MUCH THEY COST (5 sq. in. part)	WHAT THEY CAN DO	WHERE TO USE THEM
THERMOPLASTICS		
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ABS (Cryolac, Kralastic)	Exceptionally tough, strong. Can be colored. Resists weather, chemicals. Good moldability.	Luggage, shoe heels, pipe and pipe fittings, valve parts, battery cases, appliances, fan blades, housings for radios.
Acetal (Delrin, Celcon)	High strength, stiff, high heat resistance (250 F), excellent fatigue life, high solvent resistance, low frictional properties.	Gears, housings and cover plates, plumbing and hardware, auto interior trim, aerosol containers, appliance parts, pump impellers, carburetor parts.
Acrylics (Plexiglass, Lucite)	Exceptional clarity, good light transmission. Can pipe light. Hard, rigid, resistant to sharp impact. Excellent weatherability. Not brittle at low temperatures. Withstands normal hot water temperature. Some grades resist to 200F. Can't be cleaned with grit-containing materials.	Optical parts such as architectural and aircraft glazing, lenses (made from cast acrylic), display signs, instrument panels, auto taillights and medallions (injection and extrusion grades), outboard motor housings (injection grade).
Cellulosics	Strong, durable, colorful. Withstand moderate heat. CA: resists most household chemicals, oil, gasoline, cleaning fluids; not alcohol, alkalis. CAB, CP: only cellulosics recommended for outdoor use. Some types resist water near boiling. EC: keeps toughness and resiliency at subzero temperatures.	CA: buttons, toys, electrical parts, cutlery handles (injection molding), packaging, vacuum-formed parts, tape, insulation (sheet, film). CAB: telephone handsets, radio housings, steering wheels (injection molding), outdoor signs (sheet). CP: auto arm rests, radio housings, pen and pencil barrels. EC: tool handles, garage door rollers.
Chlorinated Polyether (Penton, Polypenco)	Extreme chemical resistance, can be extruded and injection molded. Excellent heat resistance (290 F). Low moisture absorption. Excellent mechanical strength.	Gaskets, valves, pump bodies and impellers, pipe. Corrosion resistant parts.
Fluorocarbons (Teflon, Kel-F)	High chemical resistance. Stable over wide temperature range. High heat resistance—to 400F. CFE—to 550F. TFE—low moisture absorption, high arc resistance. FEP—can be injection-molded.	Electrical insulation, pump parts, gaskets, packings, laboratory ware, linings, laminates.
Nylons	Tough, resists abrasion, durable, good chemical resistance, resists heat (300 F), good dielectric properties, low frictional properties. Can be molded into complex shapes.	Slide fasteners, gears and other mechanical parts, faucet washers, wire and cable insulation, tubing, industrial fabrics, automotive components.
Polycarbonate	Extreme toughness, excellent dimensional stability, starts to distort at 280F, good electrical properties, good fatigue resistance, excellent chemical resistance.	Housings for business machines, electrical apparatus, gears, bearings, fasteners, cams, valves. Possible replacement for zinc die castings in some applications.
Polyethylenes	Low density: flexible, low heat resistance, high impact strength. Medium density: less flexible, less permeable, less impact strength. Heat resistance 220-250 F. High density: stiff, resists over 250 F, strongest polyethylene, least ductile, permeable.	Low density: carboys, drums, housewares, toys, packaging film, pipe, tubing, coatings. Medium density: housewares. High density: packaging film, pipe, housewares, housings, closures, valves, coatings, squeeze bottles.

Plastics Gives Buyers Wide but Difficult Choice

pound class. Other leading materials: phenolics, urea and melamine, polyesters, and cellulotics. Engineers in general agree that the plastics that have been around the longest—the polystyrenes, vinyls, phenolics, and cellulotics such as cellulose acetates and cellulose butyrates—will have trouble maintaining current growth rates.

Greater Versatility and Economy

Many of the newer plastics—whose production is still measured in millions of pounds—offer more versatility and/or greater economy than their older relatives. Low-cost polypropylene and ABS (Acrylonitrile-butadiene-styrene) are touted for especially fast growth in the general-purpose field, while the acetals and polycarbonates are expected to enjoy increasing sales as “replacement for metals.”

The company facing the problem of choosing one plastic from among the thousands must match the job at hand with the properties of each major group. The “right” plastic is the one that meets the necessary physical requirements at the lowest per piece cost (including processing).

All plastics fall into one of two major groups—thermoplastics or thermosets. Basically, thermoplastics are made by heating the resin to semiliquid state, forming it to the desired shape, and letting it cool. Thermoplastics will lose their shape if they are heated above the melting point of the plastic. Thermosets on the other

hand, are processed by squeezing the resin to the desired shape in a mold (with heat). The shape cannot be changed once the plastic has set.

Most thermoplastics are formed by one of three techniques: injection molding, blow molding or extrusion. Injection molding is similar to die casting of metals. A plunger takes a measured amount of resin from a hopper, melts it and pushes it into a die where it takes shape. A wide variety of sizes and shapes can be formed at rapid speeds.

Blow Molding Process

Blow molding processes are used primarily to make thin-walled hollow objects, such as bottles. A gob of molten plastic roughly resembling the finished article is extruded by the machine and then dropped into a mold. Air is blown in the top to shape the plastic against the mold. Extrusion is used to make continuous sheet, film, pipe, rods and shapes. A continuous screw moves the resin through a heating chamber where it melts. Molten plastic is forced out through a die with the desired shape.

The cost figures in the chart below are designed to help you compare the relative costs of using different plastics. Actual part costs will, of course, vary with size, shape, length of run, and other variables such as color and heat resistance. Trade mark designations represent only a sampling of different makes available.

HOW MUCH THEY COST (5 cu. in. part)	WHAT THEY CAN DO	WHERE TO USE THEM
THERMOPLASTICS		
 Polypropylene	Rigid, high tensile and impact strength. Continuous-duty temperature—275-320 F. Excellent dielectric properties, low water absorption. Resists chemical attack. Built-in “hinge” effect.	Pipe, pipe fittings, machine parts, electrical insulation, sterilizable containers, carboys, drums, battery boxes, appliance housings, rope, automobile components.
 Polystyrenes (Cryolac)	Modified: tough, shock resistant, chemical resistant, craze and thermal shock resistant. General purpose: hard, high clarity, low impact strength, low service temperature—160F. Colorable, excellent dielectric properties.	Formed: appliance housings, refrigerator door liners and parts, storage boxes, packages and containers, toys, housewares, wall tiles. Foam: insulation, floatation gear, display items.
 Vinyls (PVC, Geon)	High strength, rigid. Addition of plasticizer makes material flexible. Resists abrasion, chemicals, water, heat, cold. For indoor use primarily, but some types have excellent weatherability. Self-extinguishing, wide color range, excellent electrical properties.	Pipe, pipe fittings, valves, records, shower curtains, upholstery, hose, wire and cable insulation, gaskets, floor and wall coverings, coated materials, bottle caps, window sash.
THERMOSETS		
 Epoxies	High strength when used in laminates. Rigid, but can be made flexible. Outstanding ability to bond materials. Excellent chemical resistance, low moisture absorption, good electrical properties.	Electrical components; high-strength, high-temperature laminates; printed circuits; tools and jigs; protective coatings.
 Melamines	High heat resistance (210-400 F, depending on filler), solvent and chemical resistant, extreme surface hardness, unlimited colorability, high dielectric strength.	Dinnerware, decorative laminates, wet strength paper, baking enamel finishes, textile treatment, aerosol dispensers, soda dispensers.
 Ureas	Good heat resistance (to 170 F), unlimited colorability, good resistance to solvents, oils and greases, surface hardness, mar resistance, high dielectric strength.	Cosmetic container closures, electrical mixer housings, electrical parts, stove hardware.
 Phenolics	Hard, rigid, strong, high-temperature resistance to 400F. Some varieties to 600F. Chemical resistance, limited in colorability.	TV and radio cabinets, handles for electrical appliances, grinding wheels, tool and farming dies, electrical components, washing machine agitators.
 Polyesters, Alkyds (Dapon)	Excellent dimensional stability, good dielectric properties, unlimited colorability. In liquid form they cure fast at room or elevated temperature.	Reinforced plastics (impregnated glass, paper, synthetic and natural fabrics) boats, panels, aircraft, truck and bus components, electrical parts, furniture. Castings: buttons, jewels, lenses, electrical potting. Premix molding compounds: ducts, refrigerator parts, housings.
 Silicones	High heat stability to 590F, depending on filler material. Good dielectric properties, excellent chemical and water resistance, retains strength at high temperatures, good lubricant.	Electrical products: switch parts, coil forms, motor insulation. Also laminates as radomes, ductwork, arc barriers, electrical equipment housings.

Radically New Refrigerated Trailer Put Through Final Tests by REA

New York — The prototype model of a radically new refrigerated trailer is being put through its paces this month by REA Leasing Co.

Instead of using a conventional mechanical refrigeration system, the polyurethane insulated trailer is cooled by liquid nitrogen which is sprayed throughout the interior of the van. The system, developed by Union Carbide's Line Co. Div., can maintain temperatures as low as minus 20 F.

REA Leasing a subsidiary of REA Express, said the "Polarstream" process requires "virtually no maintenance or repair." The new 40-ft. unit can run up to eight days without in-transit attention, and in addition, is cheaper to build and weighs about a ton less than mechanically-refrigerated trailers of equivalent size.

In its first run, the new unit

piggybacked fresh meat from the Armour & Co. plant in Omaha to Chicago over the tracks of the Burlington Railroad. The tests are scheduled to continue for about a month.

REA Leasing will make the new equipment available to members of its national trailer and container pool on a per diem basis. It also will provide the equipment to other shippers, forwarders and carriers on a standard lease arrangement.



NEW REFRIGERATION UNIT: Nonmechanical refrigeration process used in 40-ft. aluminum polyurethane-insulated vans developed by REA and Linde Corp. can run up to eight days without in-transit attention.

TVA Sues Westinghouse

Washington—Tennessee Valley Authority sued Westinghouse Electric Corp. for \$20-million last week, charging Westinghouse failed to meet contract specifications on 16 turbo-generator units installed in three TVA plants.

In reply to the complaint, a Westinghouse spokesman in Pittsburgh said the machines have been "performing well for years" and are operating so close to the contracted for efficiency rating that it is impossible to measure any deficiency.

The complaint climaxes three years of feuding between TVA and Westinghouse.

Canada Boosts Exports Of Auto Parts to U.S. Under New Tariff Plan

Hamilton, Ont.—Canada's program for boosting exports of automobile components to the U. S. is getting off to a fast start.

First American auto maker to increase its buying north of the border is Studebaker-Packard, which will purchase from Dominion Forge in Walkerville about half the connecting rod forgings needed for its 1962 six-cylinder models in the U. S. The deal was made through the company's subsidiary here, Studebaker-Packard of Canada, Ltd., which now is negotiating similar arrangements with other Canadian manufacturers of auto parts.

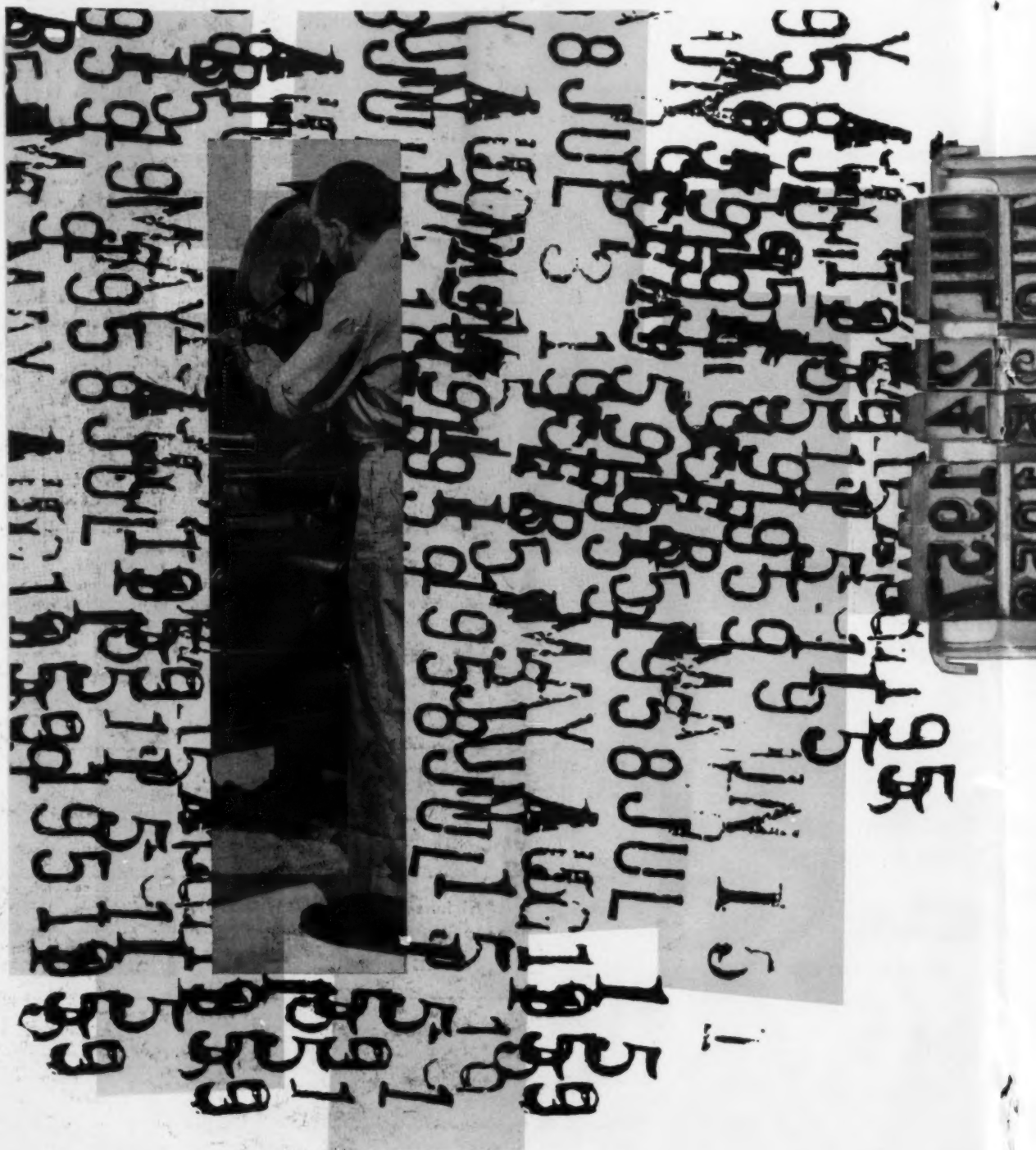
Studebaker-Packard said the Canadian buying is in line with "the spirit of the Bladen Report." This report, submitted to Parliament recently by economist Victor Bladen, consists of a series of recommendations designed to improve Canada's balance of trade by strengthening the nation's domestic auto industry.

One of the major proposals made in the report—removal of Canada's 7½% excise tax on new car sales—already has been put into effect. Ontario car dealers report that sales have shot up from 10% to 30% as a result of this move.

The Canadian government has deferred action on Bladen's other suggestions, which have to do mainly with tariff policies, until the views of the industry can be obtained.

As far as American manufacturers are concerned the key proposal of the Bladen report is that Canadian subsidiaries of foreign car makers be allowed to import finished cars or parts duty free, in proportion to the value of cars or parts they produce or purchase in Canada.

Among the other American automobile manufacturers, Chrysler and American Motors are believed to be the ones most interested in the Bladen report. However, spokesmen for the two companies said they would not commit themselves on the proposals until they have been officially approved by the Canadian government.



BRIDGEPORT

Transportation Memos

FREIGHT BILL SNARL: Shutdown of two Eastern freight bill clearing houses—Transport Clearings of New England and Transport Clearings of Metropolitan New York—has caught shippers in a legal tangle which the courts may be asked to resolve.

The clearing houses, which between them handled over \$200-million in bills annually, foundered because it took them too long to process documents and follow up on collections.

Since the closings, individual carriers, as well as the New York and Boston banks which had financed the clearing operations, have been submitting bills to shippers—in many cases for payment on the same shipments. The courts now may have to decide

who is entitled to be paid and whether a shipper must pay twice if he paid the wrong party.

SUPER FREIGHT TRAIN: A revolutionary new type of freight train, with double the capacity of present trainloads, now is being studied by a group of 35 railroads, including all the major Eastern carriers.

The proposed train, made up of extra-large cars, would be capable of carrying up to 25,000 tons of coal, ore, grains, or other bulk materials. It would operate at high speeds in a terminal-to-terminal operation, and unlike conventional trains, would never be broken up in the course of normal business.

As now planned, the new freight train would be owned by a leasing organization rather than by individual railroads.

POSTAL FEE HIKE: The Post Office Dept. said it is going to raise from 50¢ to 60¢ the fee for registry of packages valued up to \$10. The increase, scheduled to go into effect Aug. 15, is expected to boost postal revenues by about \$2.9-million annually. This category accounts for approximately 75% of all postal registry transactions.

EUROPEAN SERVICE: A new monthly cargo service between the Gulf Coast and the United Kingdom and Continental Europe will be launched Aug. 2 when the cargo liner Frank Lykes sails from Mobile. The vessel, owned by Lykes Bros. Steamship Co., Inc., will make U. S. stops at Galveston, Houston, Lake Charles, and New Orleans.

European ports of call include Southampton, London, LeHavre, Antwerp, and Rotterdam. Depending on the availability of cargo, Lykes plans to provide additional sailings and to stop at other Gulf ports, such as Pensacola, Gulfport, Pascagoula, Port St. Joe, Tampa, and Panama City.

CANADA PUSHES LCL: Contrary to a trend developing among some U.S. railroads who find LCL traffic a burden, Canadian railways plan to promote the service by introducing incentive rates for LCL freight in Quebec and Ontario July 31.

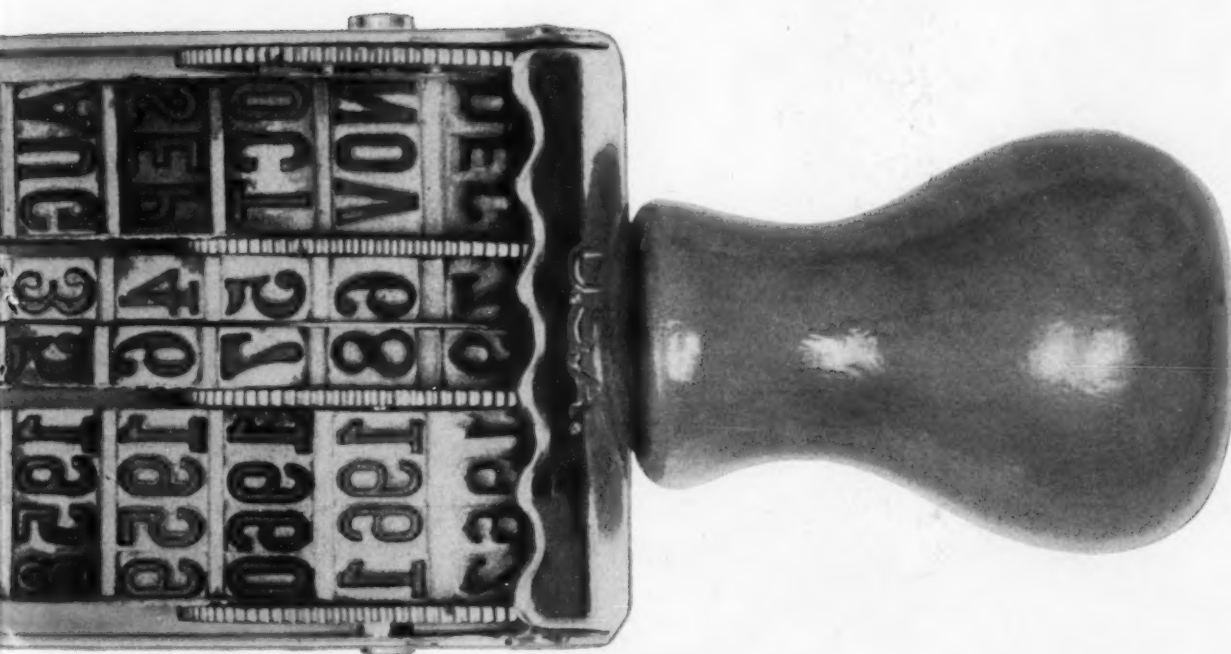
Canadian National and Canadian Pacific said the new rates will apply to all classes of freight, except those not suitable for pickup and delivery, such as perishables, explosives, livestock and bulk freight.

LEASING POOL: Nine more railroads have joined the new piggyback trailer and container leasing pool run by REA Leasing Co., a subsidiary of REA Express, bringing pool membership to 16. The new members are the Burlington, Clinchfield, Erie-Lackawanna, Lehigh Valley, Missouri Pacific, Reading, Frisco, Seaboard and Wabash.

AIR TALKS RECESSED: The U.S. and Japan have recessed "for a short time" their talks on a proposed round-the-world route via New York City for Japan Airlines. The U.S. is believed to have offered Japan a transcontinental route linking present Japanese flights to the West Coast with New York, but is reluctant to grant North Atlantic routes to countries which don't have "access to the Atlantic Ocean."

Meanwhile, the U.S. officials said they will "study" Canadian proposals to extend their air routes south as far as Dallas, Miami and San Diego.

WHISTLESTOPS: Hudson Transportation Co. has opened a new truck terminal in Kutztown, Pa. . . New York Central will consolidate freight agency services for the 34-mile stretch between Buffalo and Model City into a single center in Buffalo. . . Philadelphia plans to build a \$4-million marine terminal at Port Richmond in 1962. . . BOAC has hired an outside consultant to analyze future trends in air cargo traffic.



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Purchasing Week's Professional Perspective



CONSULTANT ROBERT C. KELLEY

Former Director of Purchases, Dresser Industries

Discusses This P/W Headline

**'Compacts Here to Stay,
Most Fleet Buyers Feel'** —(P/W, 7/10/61)

Automobile buying for the company fleet presents perennial problems as the time for introduction of the 1962 line approaches.

The P.A. still has no choice in selecting the supply point (jobber or direct from the manufacturer) because trade practice forces him to buy from the retail dealer to whom fleet business is strictly a sideline, even though some dealers cater to this volume business more than others. But the buyer must be careful to by-pass the salesman on the floor (who gets a 5% commission) and to anticipate his requirements far enough in advance so that he will not have to take the "loaded" car off the floor.

In one respect, the automotive buyer has an advantage which he does not enjoy in purchasing any other fabricated or manufactured article. He knows his supplier's cost. Dealer costs on all American and foreign passenger cars, as well as small trucks (½ ton and ¾ ton), are listed in several publications, among them *Car Fax*, which sells for \$2 a copy. **Write for it to:** Car Fax, Inc., 550 Fifth Ave., N. Y. 36, N. Y.

Purchasing agents in metropolitan areas and big fleet buyers have the advantage of seeing the new models for 1962 a month in advance of the public showings; in fact, they preview them at

the same time as the dealers. Now the question is: What should the buyer look for when the wraps come off the 62's?

• **Cost trend of major extras.** These are V-8 engine, automatic transmissions, heater and radio, power steering, power brakes.

• **Storage space dimensions.** Because many cars are used to carry samples and merchandise, trunk size is important to the fleet buyer.

• **Road Clearance.** Rim diameters, tire sizes, and spring suspension are important features for companies whose cars are used on rough roads.

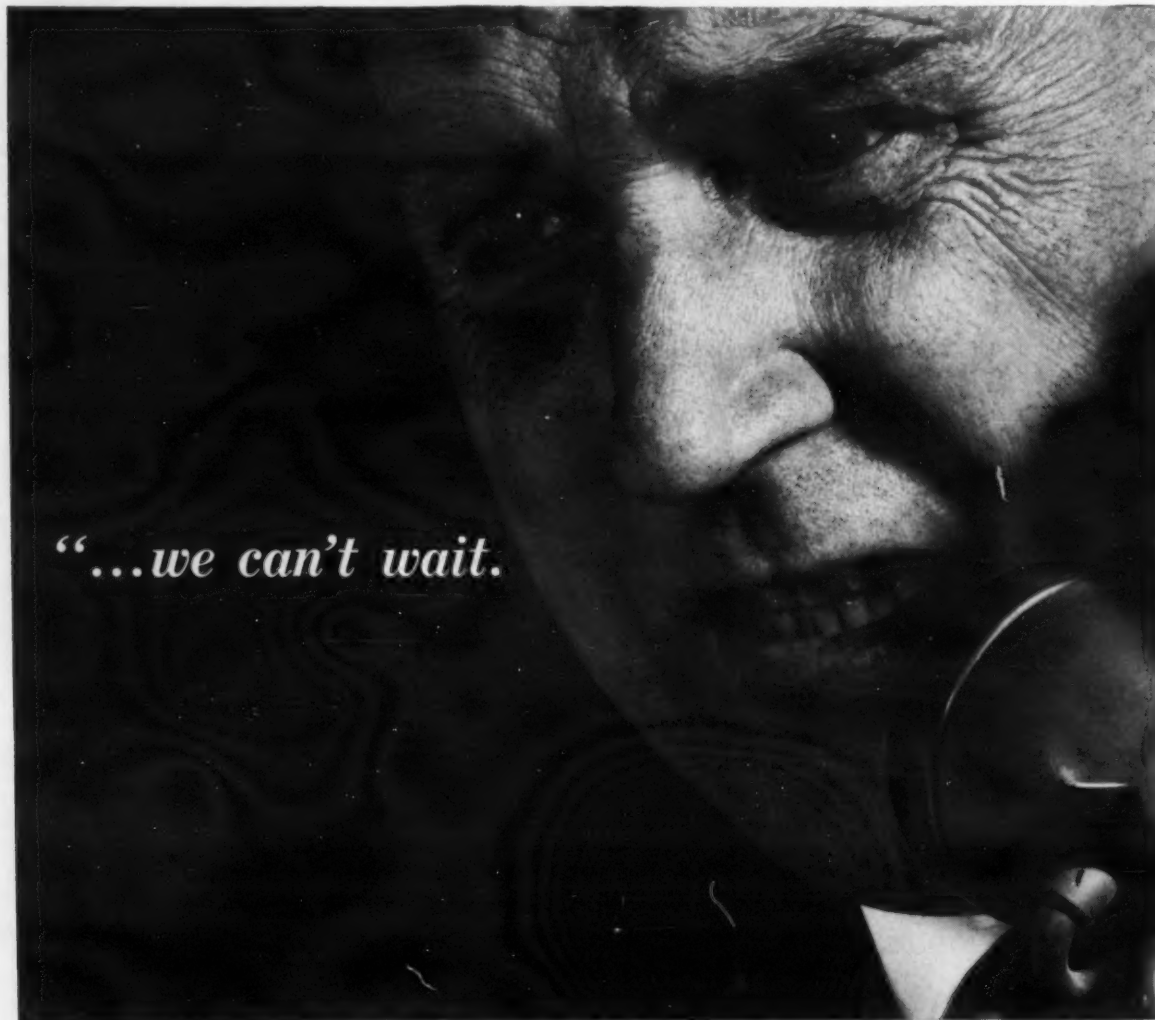
• **Maintenance and parts guarantees.** There's been a trend toward one-year or 12,000-mile guarantees, as well as the sealed-in lubrication and longer life parts.

• **What's new in compacts.** An evaluation of the compact car versus the standard variety assumes new importance. What is the place of the compact in the corporate fleet? Its economy of operation has already been proved. A recent survey shows that on a 20,000-mile-a-year car, the compact can be operated for 1¼¢ a mile less than the standard car. For stop-and-start driving in cities, such as meter reading for utility companies, it fills a real need. Junior salesmen and trainees get them in many organizations which are well aware of the morale and personnel problems in downgrading the older men from standard cars to compacts. Figures also show that in 1961 the compact group captured 20% of the fleet market and this should increase in 1962. The compact has not, however, made inroads into the high mileage off-highway car where medium line standards are preferred.

• **When should a car be replaced?** Recent studies show that a two-year or 50,000-mile car point is the ideal time to replace the fleet car. With proper maintenance, very little expense has been incurred in this period, and depreciation book value matches resale value, since clean two-year-old cars bring good prices in the used car market. If, however, it is decided to keep the car and incur the expense of new tires, overhaul, and so forth, the vehicle should be run at least another year up to 75,000 miles. With proper care, this can be extended to 100,000 miles or four years, by transferring the car to less arduous service. Then the car is fully depreciated and has several hundred dollars in salvage value.

One of the cardinal rules in car buying is the timing of the purchase to get the ultimate advantage of the first year's depreciation. 1961 models are no longer a bargain, as in a few months they will take a year's depreciation.

Another thing buyers must be careful about is buying cars loaded with extras that don't show up in the resale price. For example, white sidewall tires, two-tone paint, power steering and power brakes add little, if anything, to the resale value of a fleet car. Automatic transmission and V-8 engines, on the other hand, can be recovered when the car is sold, although higher operating costs of the automatics may swing the balance in favor of the stick shift. In the case of air conditioners, their resale value is restricted mainly to the Southern and Southwestern states.



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When you can't afford delay, tell vendors to ship via United Air Freight. United links 117 cities... coast to coast and border to border with one carrier Air Freight Service.

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Your shipment receives Extra Care from door to door. Reserved Air Freight makes sure there's room for your shipment on the specific flight you need.

Next time you need a shipment in a hurry, have it sent via United Air Freight.

WORLD'S LARGEST JET FLEET



KNOWN FOR EXTRA CARE

Chase Making New Rhenium-Tungsten Alloy

Waterbury, Conn. — Chase Brass & Copper Co. has begun producing commercial quantities of a new rhenium-tungsten alloy in strip, wire and rod form.

Chase, a subsidiary of Kennecott Copper Corp., said development of the alloy will simplify the problem of measuring ultra-high temperatures in the electronics, aerospace, missile and nuclear fields.

For example, the company said a thermocouple made out of the new alloy has an operating temperature range of up to 5,400 F., while platinum group thermocouples are effective only up to about 3,000 F. The only other way of measuring these ultra-high temperatures is with optical devices, which are much larger in size and difficult to use since they require visual access to the heated material.

The new alloy costs substantially less than pure rhenium, which is one of the most expensive of the rare metals. Chase's base price on .005 in. dia. wire made of pure rhenium, for instance, is \$1/ft., while the price on the same gage wire made of the alloy is 32¢/ft.

For strip, the alloy price is somewhat higher in relation to the pure rhenium price. On strip 1 in. wide and .005 in. thick, the base price is \$1,210/lb. for pure rhenium and \$1,045/lb. for the alloy.

Allen Springmeyer, chief metallurgist for Chase's Rhenium Div., attributed this difference to the fact that the company has spent more time developing methods for fabricating wire and rod with the alloy than it has on producing strip. He predicted that within the next year substantial reductions will be made in the price of alloy strip and that eventually its price will fall to about one-third that of pure rhenium strip—about the same ratio now prevailing for wire prices.

Russell, Burdsall Forms Sintered Products Div.

Port Chester, N. Y.—Russell, Burdsall & Ward Bolt and Nut Co. is going into the manufacture of powder metal parts. A newly organized Sintered Products Div. is sintering parts from brass, bronze, copper, Monel, and nickel silver as well as iron, steel, and stainless steel.

Typical parts to be produced by RB&W from powder metals include standard nuts, special nuts and shapes with tapped holes, sleeves, spacers, inserts, discs, gears, rollers, electrical connectors, mechanisms, and

bushings. The company said application of powder metallurgy techniques to such parts results in high-quality components of specified strength and properties in large volumes at low cost.

Braden Copper Expands

New York—Braden Copper Co. announced it is spending \$6-million to increase the productive capacity of its mine, mill, and smelter facilities at Rancagua, Chile. The property, world's largest underground copper mining operation, will be geared to achieve an annual output of 191,000 tons on completion of the expansion and modernization.

Cannon Electric to Stress Handling of Product Line By Industrial Distributors

Los Angeles—Cannon Electric Co. announced this week it will channel more of its products through industrial distributors. The company said its service stores will continue to operate but will stock only products not normally handled through distributor markets.

In announcing the decision to emphasize industrial distributors, Cannon said its distributor items are available to customers locally at factory prices. But, the announcement added, "It is normal practice for these Cannon distributors to offer liberal terms and shipping allowances that are not available when purchasing directly from the factory."

Aluminium, Ltd., to Build New Sheet Mill in Canada

Kingston, Ont. — Aluminium, Ltd., will double its capacity for rolling aluminum sheet in Canada within the next 18 months through construction of a new modern sheet mill here.

The company said its subsidiary, Aluminum Company of Canada, Ltd., will spend about \$11-million to build the new mill, scheduled to begin production toward the end of 1962. The plant will be capable of rolling wider sheet and plate and larger coils of sheet than have been available up to now from Canadian sources and will double sheet capacity to 60,000 tons a year.

Richfield Oil Files Suits In Alleged Kickback Case

Long Beach, Calif.—Richfield Oil Co. has filed suits to recover more than \$100,000 from two former employees and a vendor accused of defrauding the company through a kickback scheme.

The suit alleges that the employees—an engineer and a buyer—conspired to defraud the company through a system of "false, fictitious and excessive labor and material charges."

According to the suit, a kickback arrangement existed between the two men and a machine and boiler firm whose president is accused of including overcharges in its invoices.

GAYLORD helps you find hidden packaging costs

The packaging costs you don't see do hurt your profit picture. Eliminate them.

Call in your nearby Gaylord Man. His sharp eye can detect unnecessary packaging expenses. His up-to-date container knowledge can help you make hay—and keep it.

And you don't have to needle him. A phone call is all it takes. Make it today.



CROWN ZELLERBACH CORPORATION
GAYLORD CONTAINER DIVISION



IN CANADA - CROWN ZELLERBACH
CANADA LTD VANCOUVER B.C.
HEADQUARTERS ST LOUIS
PLANTS COAST TO COAST

Product Perspective

PRESSURE-SENSITIVE TAPES AND SHEETS are replacing pen and ink in a wide variety of industry tasks ranging from making chart presentations to preparing schematics of complex electric circuitry. The extensive group of lines, bars, shapes, patterns, and symbols are precision-printed on adhesive-backed tapes and sheets, ready for instant use.

Tapes come in an almost endless number of sizes, colors and designs. Patterns range from cross-hatching (for making graphs) to rolls with a variety of draftsman symbols representing walls, structural components, power lines, material conveyors, etc.—all drawn to a 1/4-in. scale. Special patterns can also be printed to order. Chart-Pak, Inc., a major tape supplier, sells a 3/8-in. wide black tape 324-in. long for \$1.35; while a 1/4-in. red roll goes for \$1.

Sheets come in both opaque paper (adhesive-backed) and transparent film. Each sheet contains a number of symbols such as electrical components or rectangles and squares (for organization and flow charts). Rectangles and circles sell for \$1, a pack (120, 1 1/2-in. dia circles) while electronic symbols are tagged at about 85¢ (36 large designs).

Many accessories also are available to make it easier to apply the tapes and symbols. An ingenious tape holder resembling a fountain pen permits the user to roll on a line of tape, freehand, or following a French curve. A multiple pen is available to permit laying down several parallel lines at the same time. Compass holders convert the pens to making circles with narrow tape. Sheets, grids, planning boards, knives, and related tools simplify layouts.

Here's how these pressure-sensitive materials can be used in everyday plant jobs:

- **Office layouts.** Walls, partitions, and other structural components may be indicated with pattern tapes on grid board. Scaled templates of all office furniture and equipment may be moved around to get best layout—fixed in position to make copies of final arrangement.

- **Plant layout.** Patterned tapes with power lines, material conveyors, and piping can be positioned on grid lines. Templates representing machinery can be made to scale from ruled sheets—placed on master layout.

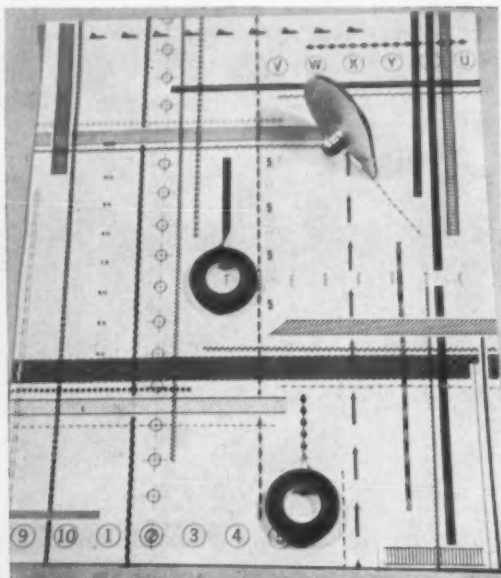
- **Maps.** Tapes representing railroad tracks, telephone lines, streets, and other important routings can be put on map surface in minutes.

- **Visual presentations.** Symbols representing numbers of persons, foodstuffs, money, automobiles, ships and the like permit rapid construction of pictorial graphs. A wide variety of tapes enable user to make bar charts, statistical curves, etc.

- **Organization charts.** Rectangles, circles, triangles and tapes for connecting lines make quick assembly and updating of organization charts possible.

- **Advertising and art.** Tape imprinted with border patterns and symbols make composition easy. These materials are especially well-suited to photo-composition techniques.

- **Electronic schematics.** Hundreds of symbols used in electronic design and printed circuitry, produced to engineering and government specifications, are available. Draftsmen need only cut symbols from backing sheet—place them on the schematic.



HUNDREDS OF TAPES can be used for almost any type of visual presentation. Patterns above are made by Chart-Pak, Inc. Item on right is "pen" for applying tapes to charts and diagrams.



GRAPHS can be keyed with various color, design lines. Updating data is simple job with tape.

Here's your weekly guide to...



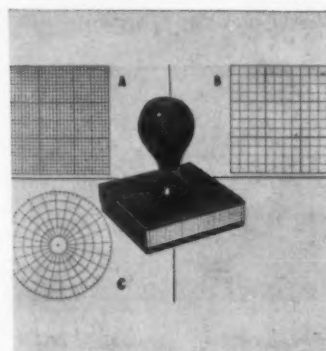
Ball-Point Pen

Takes Standard Cartridges

Ball-point office pen is refillable with standard-size cartridges. It comes in four point styles—fine, extra fine, medium, and broad—with blue, black, red, or green ink which is reproducible on both "wet" and "dry" photocopy machines. Pens may be ordered with custom imprints.

Price: \$3/doz. (in gross lots). Delivery: 2 days to 3 wk.

Henry Ginnel & Co., 101 Tremont St., Boston, Mass. (PW, 7/24/61) SIC #3951



Rubber Stamp Kit

Produces Graphs

Kit includes three rubber stamps to produce clear graph patterns including: a 9-sq. in. graph with 100 blocks per sq. in.; a 1/4-in. grid pattern with 16 blocks per sq. in.; a polar coordinate graph of a 3-in. dia. circle with major subdivisions at 15 deg. and small markings at 5 deg. A large ink stamp pad is also included.

Price: \$10. Delivery: immediate. Edmund Scientific Co., Barrington 54, N. J. (PW, 7/24/61) SIC #3953



Abrasive Pad

Finishes Metal

Nylon pad impregnated with abrasive particles removes rust, burrs, and scratches from all types of metal. It comes in a fine and an ultra-fine grade and can be used with hot water, detergents, and most solvents, and can be rinsed for reuse. It may be used also to remove surface carbon, handmarks, and stains.

Price: 59¢/each. Delivery: immediate. Minnesota Mining & Mfg. Co., 900 Bush Ave., St. Paul 6, Minn. (PW, 7/24/61) SIC #3291



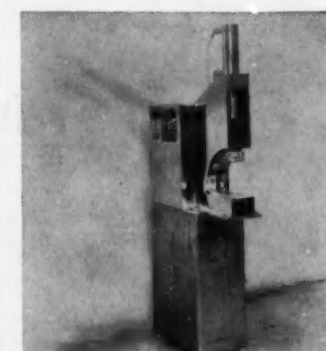
Diodes

Gives 3.9-v. to 33-v. Range

Glass zener diodes of subminiature series cover a range of 3.9 v. to 33 v. with excellent voltage regulation over a -55 C to +150 C range. Types 1N1313-1320 span the voltage range of 8.2 v. to 33 v.; types 1N1927-1937 range from 3.9 v. to 27 v.

Price: \$1.93 to \$3.50/each. Delivery: immediate.

International Rectifier Corp., 233 Kansas St., El Segundo, Calif. (PW, 7/24/61) SEC #3679



Spike Welder

Precision Welds Transistors

Bench-model spike unit precision welds transistors and minute electronic parts. It comes in four models which deliver weld pressures ranging from 2 lb. to 500 lb. The unit joins exotic and dissimilar metals with low heat and permits close spot placing.

Price: \$2,000 to \$4,000. Delivery: 3 to 4 wk.

National Electric Welding Machines Co., 1846 Trumbull St., Bay City, Mich. (PW, 7/24/61) SIC #3623

New Products

Price data that accompany each product description are list or approximated prices supplied by manufacturers. Unless otherwise noted, prices quoted are for the smallest quantity that can be ordered.



Airless Spray Gun

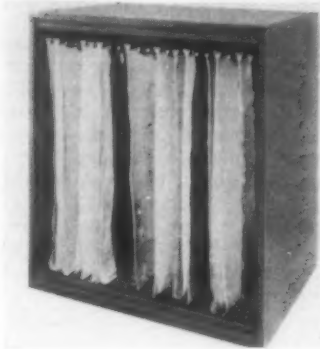
Handles Pressures to 2,000 Psi.

Gun for airless paint spraying may be used with any hydraulic pump with pressures up to 2,000 psi. A control knob on the back of the handle permits varying the amount of material sprayed and the spray angle pattern while unit is in operation. Wide choice of spray tips are interchangeable.

Price: \$65 (less tip). **Delivery:** approx. 1 wk. to 10 days.

M & E Mfg. Co., 2571 Winthrop Ave., Indianapolis 5, Ind. (PW, 7/24/61)

SIC #3561



File Cabinet

Holds Blueprints

Open-front, steel filing cabinet holds blueprints, drawings, etc., up to 24 in. x 36 in. It comes with 22 binders able to hold 75 prints each; total capacity, 1,650. The cabinet is 36 in. wide, 42 in. high, and 26 in. deep, and has ceiling-mounted traverse tracks for the binders. A label strip extends across the front for indexing.

Price: \$192.50. **Delivery:** 2 wk.
Dancer Stikfile Co., P. O. Box 10221, Houston 18, Tex. (PW, 7/24/61)

SIC #2522



Test Chamber

Has -100C to +350C range

Temperature-humidity test chamber uses liquid CO₂ refrigeration to lower temperature to as low as -100 C and to control a range of 20% to 95% relative humidity. Temperature may be brought to as high as +350 C. The internal working area is an 18-in. cube and a 2-pen, 2-cam programming-recording controller is standard equipment.

Price: \$2,675. **Delivery:** immediate.
Associated Testing Laboratories, Inc., Wayne, N. J. (PW, 7/24/61)

SIC #3569



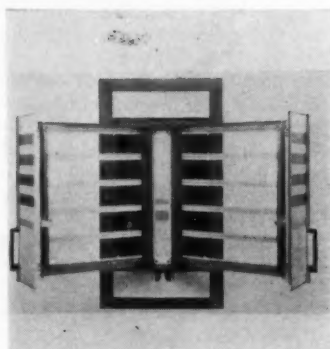
Fiberglass Gun Roving

Distributes Evenly

Fiberglass roving for plastic reinforcement is static-free material designed for use with spray-up guns. It chops evenly without clumping and conforms to intricate shapes and radii when laid down. The soft material traps resin without draining, resulting in an absence of dry areas in all laminates having ratios of up to 40% glass content.

Price: 44¢/lb. **Delivery:** immediate.
Johns-Manville Fiber Glass, Inc., Toledo, Ohio. (PW, 7/24/61)

SIC #3229



Digital Modules Case

Holds 250 Modules

Rack-mounted digital modules case has a capacity for 250 modules and provides for as many as 200 signal lights. It slides out and opens like a book for easy access to modules and wiring. Unit takes less than 30 in. of panel height in a 19-in. rack and is suited for use where all digital circuits can be housed in a single case.

Price: \$1,245. **Delivery:** 60 days.
Packard Bell Computer, 1905 Armacost Ave., Los Angeles, Calif. (PW, 7/24/61)

SIC #3679



Masonry Drill

Has Hammer Action

Electric tool for drilling masonry holes has three-way action: hammering with automatic power rotation, hammering without rotary action, and drilling without hammering action. The tool delivers 2,400 blows per min. and 500 rpm. It drills holes from 1/4 in. to 1 1/2 in. in dia. and performs regular hammering jobs. A complete accessory line is available.

Price: \$225. **Delivery:** immediate.
Skil Corp., 5033 Elston Ave., Chicago 30, Ill. (PW, 7/24/61)

SIC #3548



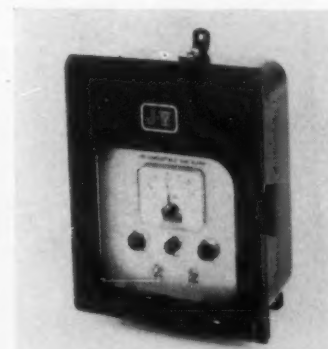
Flashlight

Includes Continuity Tester

Flashlight with special end cap holds a detachable continuity tester to test electrical circuits, controls, switches, etc. A jack plugs the tester into the flashlight and clips make contact with systems to be tested. If the flashlight lights, the circuit is complete. The heavy-duty flashlight may be used also for normal work.

Price: \$6.75. **Delivery:** 1 wk.
Ray-O-Vac Co., Madison 10, Wis. (PW, 7/24/61)

SIC #3642



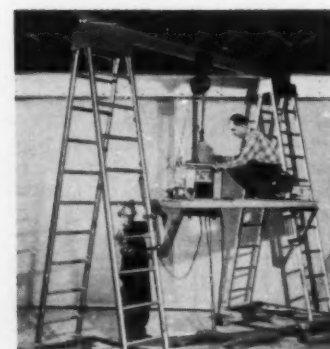
Gas Alarm

Detects Combustible Atmosphere

Alarm is diffusion-head type which continuously monitors the atmosphere for the presence of natural gas and other combustible gases. It can be modified for special requirements such as rack mounting and multipoint monitoring. A transistor-regulated power supply keeps voltage to the detector filament constant despite power line variations.

Price: \$490. **Delivery:** 6 wk.
Johnson-Williams, Inc., Palo Alto, Calif. (PW, 7/24/61)

SIC #3662



Gantry Crane

Collapses for Transport

Gantry crane is a mobile unit with four separate ladders which mount on two platform trucks to form triangular supports for the I-beam and chain block. A work platform between the supporting units, which may be used independently, adjusts from a 36-in. height to a 12-ft., 2 in. height. Unit is completely collapsible for easy transport.

Price: \$776. **Delivery:** 3 wk.
W. B. McGuire Co., Inc., P. O. Box 265, Champlain, N. Y. (PW, 7/24/61)

SIC #3536



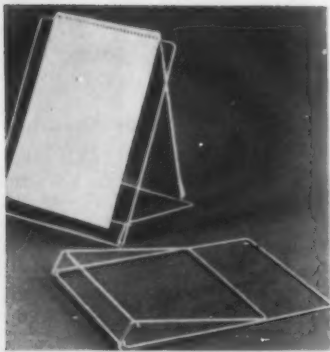
Drawing Pen Set

Has Six Nib Widths

Drawing pen set in vinyl carrying case includes a fountain pen with six interchangeable drawing point sections and a rubber nib wrench. Each nib is packed in a color-coded plastic container imprinted with exact line width which ranges from super-fine to extra-broad. A transparent window in the pen shows when it is time to refill it.

Price: \$12.95. **Delivery:** immediate.
Alvin & Co., Inc., 611 Palisado Ave., Windsor, Conn. (PW, 7/24/61)

SIC #3952



Desk Stand

Holds Steno Pad

Desk stand holds stenographic notebooks for transcribing and permits pages to be turned easily without fumbling. The lightweight device stands firmly on desktops and is made of chromeplated steel with no sharp edges to scratch. The stand easily folds compactly for storage in a desk drawer.

Price: \$1. **Delivery:** immediate.

Cel-U-Dex Corp., New Windsor, Newburgh, N. Y. (PW, 7/24/61) SIC #3499



Binder

Has Transparent Cover

Binder for wide range of uses including presentations has a cover of heavy gage acetate which is transparent, permitting use of the top sheet in the binder as a cover design or for identification. The back cover is of 20-point pressboard. Punched sheets are held in place by a fastener and the binder is available in a choice of 12 colors.

Price: 70¢ **Delivery:** immediate.

Acco Products, Ogdensburg, N. Y. (PW, 7/24/61) SIC #2782



THE SAFETY SWITCH THAT CHALLENGES COMPARISON!

Bulldog's heavy-duty safety switch!

- Minimum arcing—double-break switching
- Arc control—Vacu-Break® principle
- Pressure contacts—Clampmatic® spring action
- Positive switching—direct handle operation
- High short-circuit performance—innumerable applications

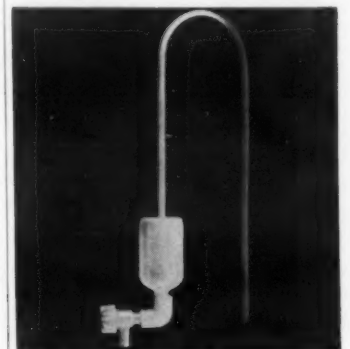
... Plus—all current-carrying parts are silvered. Available through 1200 amperes in NEMA 1 and NEMA 3R enclosures ... competitively priced. Challenge our field representative to prove these switches are the finest ... or write for details.



Bulldog Electric Products Division, I-T-E Circuit Breaker Company, Box 177, Detroit 32, Michigan. In Canada: 80 Clayson Rd., Toronto, Ont. Export Division: 13 East 40th St., New York 16, N. Y.



I-T-E CIRCUIT BREAKER COMPANY
BULLDOG ELECTRIC PRODUCTS DIVISION



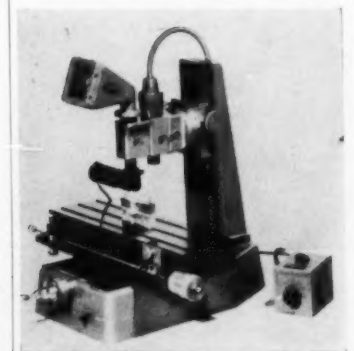
Siphon

Has "Starter" Element

Polyethylene siphon is a semi-rigid U-tube with a flexible bulb on one end. The bulb has a stopcock outlet, which is closed to start the siphoning action. The bulb is then squeezed to force air out and released to suck in the liquid. The siphon comes in 1/2- and 3/4-in. I.D. sizes and is resistant, at normal temperatures, to concentrated acids, oxidizing agents, hydroxides, and polar liquids.

Price: \$7.50 (1/4 in.) and \$10. **Delivery:** immediate.

General Scientific Equipment Co., 7516 Limekiln Pike, Philadelphia 50, Pa. (PW, 7/24/61) SIC #3561



Comparator-Microscope

Has Large Capacity

Optical measuring instrument with interchangeable microscope or projection screen optics has a measuring capacity of 4 in. x 12 in. in one setting. The staging area is 20 in. x 6 in. and has three T-slots. In addition to regular 20X or 40X microscope eyepiece, a 3-in. x 3-in. projection screen is available. The projection optics range from 5X to 50X, and 3D stereo and zoom optics may also be supplied.

Price: \$1,650 to \$1,975 (depending on accessories). **Delivery:** 5 to 10 days.

Stock & Yale, Inc., 193 Green St., Marblehead, Mass. (PW, 7/24/61) SIC #3831

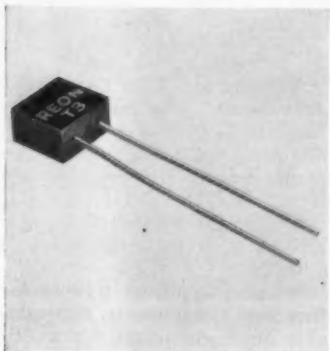


Stapler

Has Rubber Base Pad

Desk stapler has a rubber base pad which runs the full length of the unit to anchor it during use. In addition to stapling and pinning, the base swings back to convert the stapler into a tacking unit for attaching material to walls or bulletin boards. The tool is available with a light blue or fire red finish.

Price: \$5.50. **Delivery:** immediate.
Markwell Mfg. Co., Inc., 424 W. 33rd St., New York 1, N. Y. (PW, 7/24/61)
SIC #3579



Resistor

Meets High-Density Needs

Wire-wound resistors are suited for high-density packaging requirements such as printed circuit applications. The T3 is 1/4 in. x 1/4 in. x 1/8 in. with a 0.125-in. lead-wire spacing. It is rated at 1/8 w. at 125 C. The T4 is 1/2 in. x 1/4 in. x 1/8 in. with a 0.250-in. lead-wire spacing and is rated at 1/4 w. at 125 C. The T3 and T4 can be produced with maximum resistive values of one megohm and two megohms, respectively.

Price: from \$1 to \$6. **Delivery:** 3 to 4 wk.

Reon Resistor Corp., 155 Saw Mill River Rd., Yonkers, N. Y. (PW, 7/24/61) **SIC #3679**



Hand Truck

Loads Crates Easily

Truck with special handle easily loads crates of up to 1,000 lb. with no ground clearance. Turning the handle 90 deg. lets it be moved along a track to the rear of the truck where it can engage the crate with its steel "tongue." Levering back on the handle lifts the crate and permits the truck, which has rollers atop the body, to be pushed under the tilted crate. The handle slides back into its position in front to pull the load.

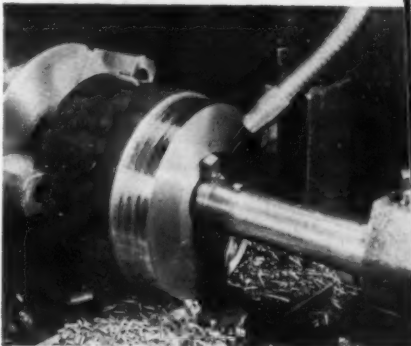
Price: \$185. **Delivery:** immediate.

Stokvis Multiton Corp., 18 Secatoag Ave., Port Washington, N. Y. (PW, 7/24/61)

SIC #3537



WIDEST SELECTION—You choose from the nation's largest and most diversified alloy steel stocks at Ryerson—available to meet even your largest requirements.



WORLD'S FASTEST CUTTING... that's Ryerson's Rycut series of alloys (see listing). And Rycut heat-treated has carbon matched to bar size for best combination of machinability and strength.



DEPENDABLE DELIVERY—Big-capacity facilities and an experienced staff with a service attitude assure quick delivery of any quantity—within hours if needed.

Purchasing Week Definitions

Annealing Techniques (Part I)

Annealing—Heat treatment of metals to produce specific mechanical, physical, or other properties. This involves raising the material to a suitable temperature, holding it there, and then cooling it, at a specified rate.

Blue Annealing—Annealing of hot-rolled ferrous sheet to soften the metal. It is heated in an open furnace to the required temperature and cooled in air. An incidental bluish oxide forms on the surface.

Box Annealing—Annealing a metal alloy under conditions that minimize oxidation. This is done in a sealed con-

tainer, where the material usually is slowly heated and cooled. The process is called also "close annealing" or "pot annealing."

Black Annealing—Box annealing a ferrous alloy sheet, strip, or wire.

Bright Annealing—Annealing in a protective medium to prevent discoloration of the bright surface.

Flame Annealing—Annealing which makes direct use of flame to apply heat.

Graphitizing—Annealing a ferrous alloy so that some or all of the carbon is precipitated as graphite. (PW, 7/24/61)

ALLOY STEELS

in Stock at Ryerson

BARS

Hot rolled and cold finished

Low Carbon Case Hardening

4615/20
E8615
8620
8620 leaded
E9310
Nitralloy
135 modified

Heat-Treated Medium Carbon

4140
4140 TG & P
4140 leaded
4147/50 leaded
4340
Rycrome®
Rycrome TG & P
Nikrome®
Nitralloy

Medium Carbon Annealed Direct Hardening

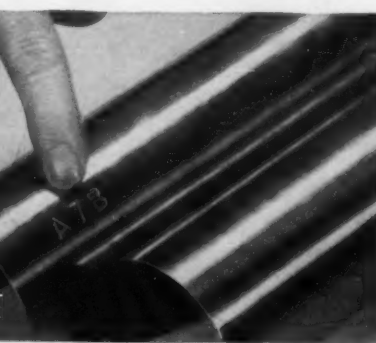
4140
4140 leaded
4147
4147/50 leaded
4340
E8150
8647 leaded

Rycut Free Machining

Rycut® 20
Rycut 40 and 50 annealed
Rycut 50 modified annealed
Rycut Heat-Treated

PLATES

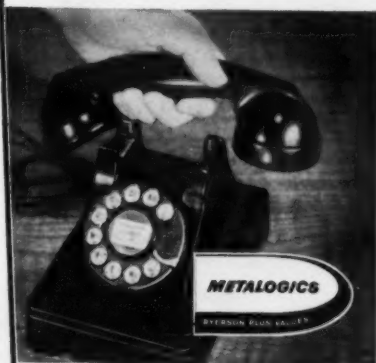
8620	T-1
E8615	Aircraft Quality
4140	4130 & E4130



8-STEP CERTIFICATION—Our unique 8-Step Certified Alloy Plan assures test-proven quality and predictable performance every time... guides heat-treatment... cuts reject loss.



TECHNICAL HELP—Your Ryerson representative is Metalogics-trained to suggest the best alloy for each application... steels to do the job faster, better—at less cost.



BE "METALOGICAL"—All the plus values of Ryerson service on alloy steel add up to the Ryerson science of giving you "optimum value for every purchasing dollar." So be "Metalogical"—call Ryerson.

RYERSON

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STEEL • ALUMINUM • PLASTICS • METALWORKING MACHINERY

USI 'Mechanical Arm' Makes Debut

New York—U.S. Industries, Inc., has developed a mechanical arm for automating small-scale production line operations. Called the "TransferRobot 200," the machine consists of an arm and an actuator which can be fitted with many types of fingers and jaws—all automatically controlled.

TransferRobot 200, which will sell for \$2,500, uses its fingers to seize, move, position and relinquish the work piece. With the use of an accessory swivel, the machine acquires a "wrist" which enables it to perform al-

most any set of manipulations. USI claims that the unit can be programmed to do many tasks merely by changing the accessories. The average foreman can learn to program the machine in an hour, according to the firm.

A unit already installed in the Westclox Co. in LaSalle, Ill., oils eight precision bearings on a clock assembly as it passes on a conveyor belt; while a TransferRobot at the Underwood Corp. in Hartford transfers and places a small typewriter component into a close fitting nest for an automatic machining operation.



TESTING EQUIPMENT, such as multicycle unit above, performs variety of checks on components.

New Quality Control Equipment Line Being Introduced by General Electric

Schenectady — General Electric has introduced a new line of quality control equipment that automatically tests electrical components and circuits. Many of the units are already in use in GE's own plants.

The units make a series of performance tests on various types of components—comparing the results with standards programmed into the tester. Ten different equipment systems have been designed so far.

GE claims operating cost figures indicate that the equipment can pay for itself in two years or less by reducing inspection expenses and improving part quality.

Two special pieces of equipment, a "Data Classifier" and an "X-Bar Sigma Computer," have been developed to work with the systems. The classifier performs an evaluation and decision function, presenting data in cellular form. The computer provides the average and standard deviation of a parameter for a sample of units under test.

Here's a rundown on nine of the testing systems:

- **Autotran III (Automatic Transformer Tester)** Performs six transformer test operations according to a punched tape program. Results are visually presented on the operator's panel as well as printed out by a paper tape printer. **Price:** \$20,000 to \$30,000.

- **Basic Appraisal System for Incoming Components.** Programmable input eliminates the multiplicity of separate test stands usually found in the incoming test area. The universal modular design allows for versatility in handling a wide variety of parameters and components. **Price:** \$20,000 to \$100,000.

- **Automatic Diode Grader.** Senses the polarity of selenium diodes, then performs a dynamic electrical test on the diodes automatically. Those that pass the dynamic test are sorted into one of 10 "accept" bins. **Price:** \$15,000 to \$27,000.

- **Four Pole Relay In-Line Tester.** Self-contained, manually programmed, relay tester designed for use in an assembly line where calibrating may be necessary before a final canning operation. Programming is done by functional pushbuttons. Contact resistance measurements are made automatically with a "go—no go" readout. **Price:** \$4,000 to \$8,000.

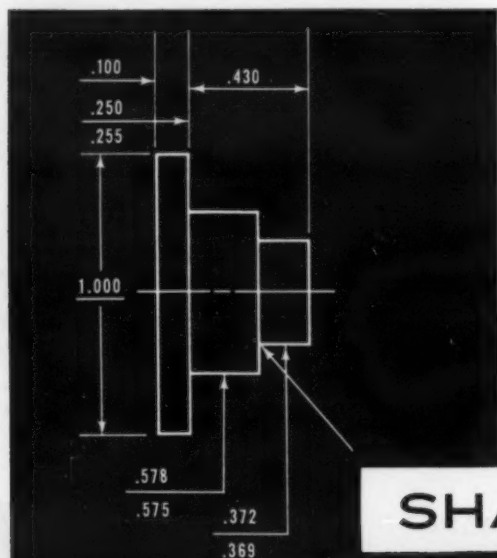
- **Automatic Transistor Classifier.** Automatically tests and classifies transistors into categories corresponding to saleable model numbers. The test system will physically classify the product in one of 18 bins. **Price:** \$35,000 to \$60,000.

- **"Spark and Mark" Cable Tester.** Automatic device for spark testing and marking of insulated wire either during the manufacturing process or in the ultimate user's plant. Sparking operation detects faults in the wire insulation. **Price:** \$5,000 to \$10,000.

- **Automatic Relay Tester.** Uses automatic programming to make 203 measurements and classify 8 parameters (including printout) in 30 sec. **Price:** About \$24,600.

- **Programed Automatic Circuit Tester (PACT).** Scans up to 3,600 points in a wire harness or assembly. Assures that proper points are interconnected, and that there are no missing or extra wires. PACT is programmed from a punched tape prepared from a wiring table. **Price:** About \$20,000.

- **Dynamic Circuit Analyzer.** Dynamically tests printed circuit boards at the plug terminals to determine if board performs its intended function. **Price:** \$20,000 to \$50,000.



inside corners

SHARP AS POSSIBLE

KEYSTONE WIRE

flowability does it!

"Inside shoulders as sharp as possible," read the specifications for this shoulder rivet used in an automobile door assembly.

"Rockford"® Screw Products Co., Rockford, Illinois, makes this part from Keystone Direct Drawn Heading Quality Wire. In three blows, original .488" diameter wire is extruded to .379" diameter and severely upset to 1" diameter. The head is consistently formed without cracking while holding to head diameter tolerances of $\pm .010$ ".

This special part, now made exclusively from Keystone Wire, is the result of extensive wire study. The flowability of this Keystone Wire allows the metal to completely fill the closed dies and achieve these sharp inside corners. Correct chemical analysis and closely controlled finish add to the successful cold heading of this shoulder rivet.

Our trained metallurgists and technicians are available to help solve your wire problems. Send us your specifications and we shall recommend the best steel analysis for you.

Keystone Steel & Wire Company, Peoria, Illinois



Product News in Brief

Looms Save 50%

Dixon, Ill.—Reynolds Div. of National-Standard Co. has developed high-speed ribbon looms for wire cloth which will result in savings to the user of as high as 50%.

Production capacities now are being increased for industrial grades ranging in width from 3/4 in. to 8 in. and in meshes from



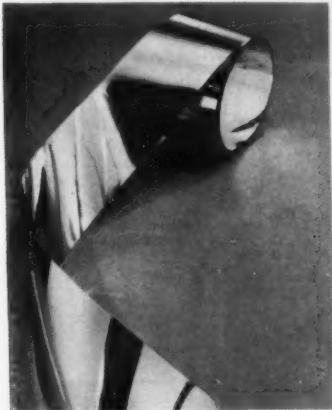
4 through 80 in appropriate wire sizes. Typical uses are for small parts where a selvage is required on both sides.

Customer specifications can be produced in brass, copper, bronze, steel, stainless, and other wires with painted, hot-galvanized, electro-galvanized, and tinned finishes.

U-C Develops Unibrite

Bridgeville, Pa.—Universal-Cyclops Steel Corp. is producing a stainless steel strip with a highly reflective finish on both sides. The Unibrite process was developed especially for the automobile, appliance, and houseware manufacturers.

The company says that in-line buffing at the production mill



imparts extra brightness and maximum corrosion resistance to the steel, and maintains a consistency of finish, color, and reflectivity on both sides of the strip. The five-station line operates at speeds of 20 to 80 ft./min. and handles coils up to 26 1/2 in. wide.

Enjay Expands Line

New York—Enjay Chemical Co. is offering four new Escon polypropylene impact grades with good processability and low-temperature performance. They are intended for use where structural rigidity over a wide range is needed.

Grade 205 is a general-purpose impact polypropylene with high flow and impact strength.

Escon 223 is a general-purpose high-impact grade for uses requiring exceptional resistance to low-temperature impact. Escon 215 and 233 have the same properties as 205 and 223, respectively, but also contain food-grade additives.

Stainless Steel Mufflers

Columbus, Ind.—Arvin Industries, Inc., is producing replacement mufflers with stainless steel which are about twice as

expensive but said to be six times more corrosion resistant than conventional units.

Sixteen types of mufflers are available to fit more than 90% of all American-made cars from 1955 models on. The stainless is used in the most corrosive-prone sections of the muffler including the shell, outer wrap, and two baffles.

Truck Bodies Weigh Less

Chicago—De Kalb Commer-

cial Body Corp. is manufacturing refrigerated dairy truck bodies that cut average weights by about 1,000 lb.

Load-bearing aluminum panels with expanded polystyrene foam cores interlock and can be replaced individually if damaged. The interlocking pattern eliminates "through metal" contacts to reduce air leakage and heat transfer, permitting more efficient refrigeration.

System Cuts Man-Hours

Dallas—Computations Southwest has worked up a computer routine which cuts the man-hours and machine time previously

needed to make cost-control analyses of gas pipeline networks.

The service company, part of Ling Temco Electronics, developed the program for an IBM 704 data processing system along with Southern Union Gas.

Fluid Boosts Tool Life

Chicago—Van Straaten Chemical Co. is offering a new water-soluble cutting fluid which the company claims increases production and tool life by as much as 100%. Called Vantrol 700, it is said to handle 95% of the jobs where straight oils are suitable.



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that
waste
!

...with new Stan-Pak Run-Rite Papers

When too much of your duplicating run ends up in the wastebasket, it's time to ask questions. Often of the paper. Is it unevenly trimmed? Too moist or too dry? Does the caliper vary?

It's not always easy to tell. But now, with new Stan-Pak® Run-Rite® Papers, you can reduce your paper waste substantially.

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Take flatness. We laboratory-test all our papers right on the duplicating machines they're made for. Stan-Pak Run-Rite Papers come to you flat. Lie flat in the machine. And feed flat.

But really trouble-free running calls

for many more qualities. Controlled moisture to avoid static conditions and insure good printability. Accurate trim and finish to prevent feeding jams. Even caliper, uniform weight and careful surface sizing to give you sharp, clean ink impressions.



You get them all in Stan-Pak Run-Rite Papers.

525 Grades, Sizes and Weights

This brand new line answers just about every office need in printing and duplicating papers. Under the Stan-Pak Run-Rite name you'll find the grade, color and weight you want—at a sensible range of prices to suit your budget.

Next time you order paper, try the brand that's made to run right. Through the duplicating machine. On the press. In the typewriter.

We're confident you'll specify it every time.

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ST.M.

Meetings You May Want to Attend

FIRST LISTING

1961 New Product Exhibit and Conference—Los Angeles Chamber of Commerce, Ambassador Hotel, Los Angeles, Sept. 7-8.

Standards Engineers Society—10th Annual Meeting, Hotel Sherman, Chicago, Sept. 18-20.

PREVIOUSLY LISTED

JULY

Chicago International Trade Fair—McCormick Place, Chicago, July 25-Aug. 10.

Institute of Surplus Dealers—16th Trade Show, N. Y. Trade Show Building, July 30-Aug. 2.

AUGUST

Eastern Hardware Show—New York Coliseum, Aug. 7-10.

Main Products Show—Augusta State Armory, Aug. 23-25.

SEPTEMBER

NAPA, District 6—Purchasing Conference, Hilton Hotel, Pittsburgh, Sept. 15-16.

Machine Tool Exposition—National Machine Tool Builders Assn., International Amphitheater, Chicago, Sept. 6-16.

Industrial Distribution Conference—Statler Hilton Hotel, Cleveland, Sept. 11-12.

Southeastern Show—Plant Maintenance and Engineering, War Memorial Coliseum, Greensboro, N. C., Sept. 12-14.

Pacific Intermountain Purchasing Agents Conference—Hotel Westward Ho, Phoenix, Ariz., Sept. 29-30.

OCTOBER

NAPA, District 2—15th Annual Southwest Purchasing Conference, Statler Hilton Hotel, Dallas, Oct. 5-6.

First Annual Western Building Industries Exposition—Great Western Exhibit Center, Los Angeles, Oct. 7-10.

National Institute of Governmental Purchasing (NIPG)—16th Annual Conference and Product Exhibit, Hotel Commodore, New York City, Oct. 8-11.

12th National Conference on Standards—American Standards Assn., Houston, Tex., Oct. 10-12.

NAPA, District 4—Purchasing Conference, Pick Fort Shelby Hotel, Detroit, Oct. 12-13.

NAPA, District 7—18th Annual Purchasing Conference, Atlanta Biltmore Hotel, Atlanta, Ga., Oct. 15-17.

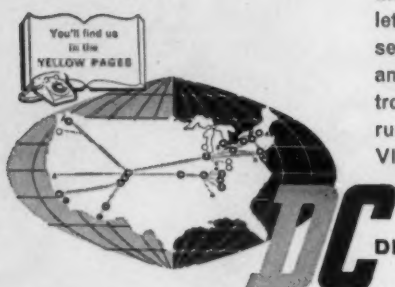
Fleet Maintenance Exposition—New York Coliseum, Oct. 23-26.

NAPA, District 8—Purchasing Conference, Essex House Hotel, Newark, N. J., Oct. 25-27.

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to the
Purchasing Agent
who wears two hats!



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the ONLY direct coast-to-coast carrier

INSPECTION PROJECTOR MAGNIFIES FOR ® QUALITY...

Our inspection projector magnifies cutting edges to eliminate the minute angular deflection that could cause you costly production losses... just one of many inspections that account for Circle R quality.

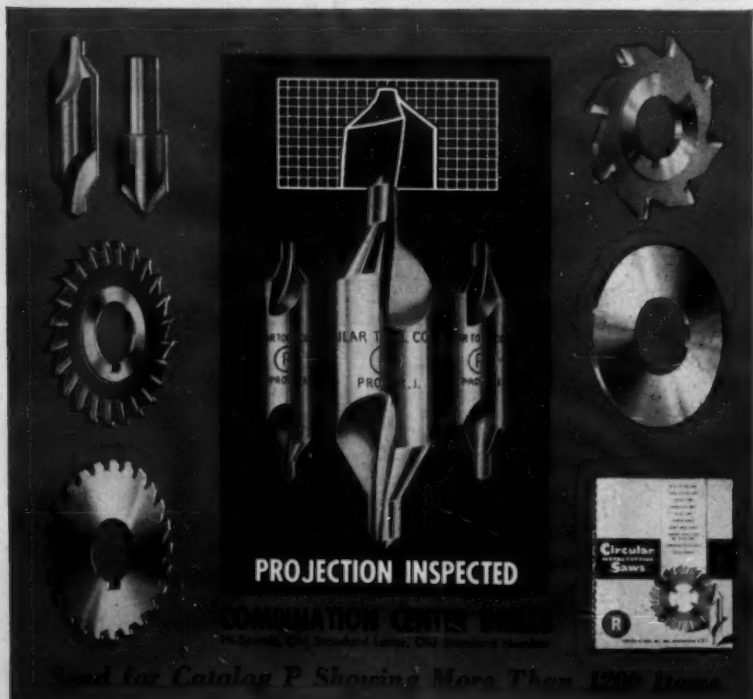
CIRCLE R saws, slitters and combination center drills must submit to constant exhaustive inspection to work their way to you. They've got to prove they can ensure you correct cutting angles, long service, and minimal downtime.

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BURBANK Production Tools, Sales Inc. CEDAR RAPIDS Michael Tool & Supply Corp. CHICAGO Donald Robertson & Co. CLEVELAND Production Tool Co. DAYTON J. B. Smith Company DETROIT J. L. Bradford Associates	HACKENSACK The Tarn Company INDIANAPOLIS Donald Millwright MEMPHIS Branch-Morris Tool Specialists MILWAUKEE Ford Tool Company MONTREAL Humphrey & Nelson NEW HYDE PARK The Tarn Company	NEW YORK CITY J. V. Granite (Export) PHILADELPHIA General Tool Sales Co. PHOENIX Dilligant Tool Center PITTSBURGH Belph Exports & Co. PROVIDENCE Fred J. McWilliam ROCHESTER James O. Stone
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Answers to Strategy Games on Page 14

Answer to Problem I

The first step in solving this problem is to determine the operating costs per Waypoint item under each plan. This is done simply by dividing the over-all operating cost under each plan by 1,000—the number of items to be produced each month:

Plan No.	Over-all Operating Cost	Operating Cost Per Item
I	\$20,000	\$20
II	18,000	18
III	16,000	16

Next, find the net profit per item under each plan by subtracting the operating cost per item from the item's sale price of \$50. Thus:

Plan No.	Net Profit Per Item
I	\$30
II	32
III	34

Since 12,000 units will be produced and sold over the course of the year, the total profits can be determined readily. By dividing these total profits by the cost of each modernization plan, the rate of return for the first year can be obtained.

Plan	Profit Per Item	Total Profit	Capital Cost	Rate of Return
*I	\$30	\$360,000	\$800,000	45%
II	32	384,000	1,000,000	38.4%
III	34	408,000	1,300,000	31.4%

Thus, Plan No. I (starred) is seen to offer the greatest rate of return for the first year.

Answer to Problem II

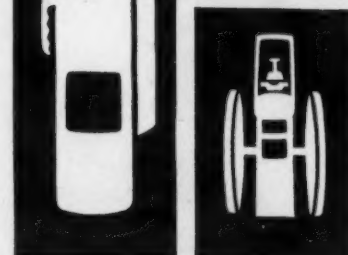
Since the planning period extends over 10 years, the first step is to find the total costs for each plant design during this period. This is simply the sum of the capital cost and all the operating costs incurred during the 10-year period. Thus, for Plant Design No. 1, the total operating costs would be $10 \times 12 \times \$20,000 = \$2,400,000$. Add this to the capital cost of the design, and you get a total cost of \$3,800,000.

Carrying out this calculation for all the plant designs results in the following table:

Plant Design	Ten-Year Operating Cost	Capital Cost	Total Cost
I	\$2,400,000	\$1,400,000	\$3,800,000
*II	2,160,000	1,600,000	3,760,000
III	2,040,000	2,000,000	4,040,000
IV	1,680,000	2,500,000	4,180,000

Thus, Plant Design No. II (starred) is seen to provide the minimum total costs.

■ a review of your company's fire protection program...now, may turn out to be one of your best decisions



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This Changing Purchasing Profession

Glen W. Beeman has been advanced from assistant director of purchases to director of purchases, **Commonwealth Edison Co.**, Chicago. Beeman, who succeeds the late Robert B. Gear, will also continue as fuel agent.

Ralph W. Dixon joined **Datex Corp.**, Monrovia, Calif., as purchasing agent. He had been a methods analyst and purchasing analyst with North American Aviation and Beckman Instruments.



G. W. Beeman R. W. Dixon

Ralph E. Parrish was made purchasing supervisor for **Kellogg Co.**, Battle Creek, Mich. He had previously been a purchasing coordinator.

J. Raymond Berg has taken the post of purchasing agent with **Coated Abrasives Div., Carborundum Co.**, Niagara Falls, N. Y. He had been purchasing agent for Buffalo Steel Corp., Tonawanda, N. Y.



R. E. Parrish J. R. Berg

Bruce C. Drumm has been named plant purchasing agent, **Industrial Div., American Radiator & Standard Sanitary Corp.**, Columbus, Ohio.

Patrick Landrigan has been appointed director of purchasing for the **Board of Education, Fort Wayne, Ind.**

Robert H. Shield has been assigned the new post of manager of purchasing, **Ittek Electro-Products Co.**, Cambridge, Mass.

Harold R. Dillow, former assistant purchasing agent for **Wheel Tracing Tool Co.**, has been made manager of marketing for the Detroit firm.

Dwight W. Olsen, an assistant purchasing agent, **Midland Div., Dow Chemical Co.**, Midland, Mich., has been transferred to the corporate purchasing department as assistant manager of purchases-national contracts.

Daniel C. Reheis was appointed production manager and purchasing agent, **Reheis Co., Inc.**, Berkeley Heights, N. J.

Frank W. Bampton was named assistant purchasing agent for **Milwaukee Gas Light Co.**, Milwaukee.

He recently retired with the rank of captain after 20 years in the Navy.

Walter N. Callahan, manager of the **Petroleum Div., Landmark Farm Bureau Cooperative**, Columbus, Ohio, has been promoted to purchasing agent of petroleum products.

Elmer W. Folkestad, manager of purchasing and traffic, **Boise Cascade Corp.'s** kraft mill, Wallula, Wash., has been made production manager.



GRAND RAPIDS ASSN. New officers met recently to map out plans for the coming year's program: (stand, l-r) Ward Heath, V.-P.; William Smith, treas.; (seat.) John VanderVeen, pres.; Homer Barber, natl. dir.

Quiet...

WAGNER Polyphase Resilient Mounted Motors in ratings through 10 horsepower

Quiet, vibration-free performance is essential when motors are installed in areas where noise must be held to a minimum . . . in hospitals, churches, schools, office buildings, restaurants and similar locations where quiet is needed or wanted.

Such installations have created a need for larger polyphase motors that whisper while they work. Wagner has met this need by expanding its line of polyphase resilient mounted motors to include standard ratings through 10 hp.

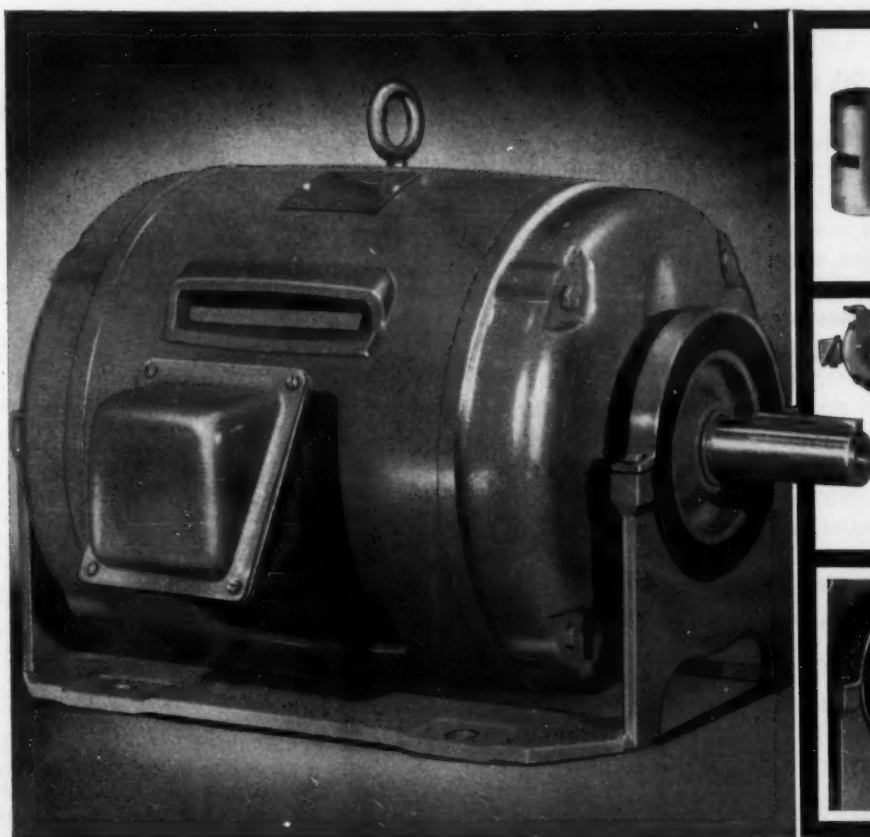
You certainly have applications that call for a smooth running motor, cushioned by resilient mountings. To make sure they're quiet, specify Wagner Poly-

phase Resilient Mounted Motors. Only Wagner can provide an entire range of ratings through 10 hp.

Constant research and development have kept Wagner up front in electric motor design for more than 65 years . . . made the name Wagner one you can depend on in choosing electric motor drives.

Your nearby Wagner Sales Engineer can help you select the right motor to meet your requirements. There are Wagner branch offices in 32 principal cities.

Wagner Electric Corporation
6416 PLYMOUTH AVENUE, ST. LOUIS 33, MISSOURI



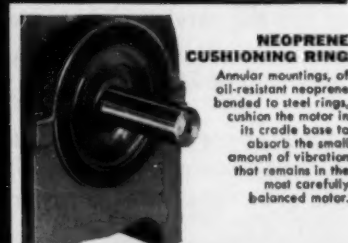
SLEEVE OR BALL BEARING

These motors are furnished with quiet running steel-backed babbitt-lined sleeve bearings of high load carrying capacity. Ball bearings can be supplied when desired.



CEILING, SIDEWALL OR HORIZONTAL MOUNTING

You can mount these motors on walls or ceilings by rotating the cradle base 90° or 180°. Motor stays drip-proof.



NEOPRENE CUSHIONING RING

Annular mountings of oil-resistant neoprene bonded to steel rings, cushion the motor in its cradle base to absorb the small amount of vibration that remains in the most carefully balanced motor.

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Purchasing Week's Los Angeles Perspective



P/W Staff Correspondent

MARVIN PETAL

**Focuses a Purchasing Spotlight
On Jet-Age Shipping in the Los Angeles Area**

The first increment of the new \$70-million Los Angeles International Airport has been completed, and Vice President Lyndon Johnson came out to dedicate the 265-acre passenger terminal. There has already been much hoopla about this jet age terminal which is designed to handle an anticipated 40-million passengers annually by 1980 as compared with the present rate of 7-million a year. But purchasing agents will be equally interested in what happens to the existing airport as the airlines move their offices next door to the new terminal.

Present plans call for phasing in a 200-acre air cargo city at the old site. As passenger carriers abandon their present buildings these would be razed and replaced with modern freight and express facilities, thus gearing for the 700% increase in air cargo business expected by 1965.

With aircraft manufacturers now readying specially designed cargo jets,

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Taylor has the products... offers more than 50 grades of standard laminates, a group of Tayloron® materials, pre-impregnated materials, molding compounds, and vulcanized fibre. Also filament windings and a number of composite materials, including sophisticated combinations of laminates, metals and rubbers.

Taylor has the facilities. Its Norristown, Pa., plant, comprising some 300,000 sq. ft., produces both vulcanized fibre and laminated plastics... is one of the most completely integrated in the industry... even makes its own paper and a large percentage of its own resins. The La Verne, Calif., plant, with over 45,000 sq. ft. of floor space, specializes in the manufacture of laminated plastics for the convenience of West Coast customers. Both plants can supply basic materials or parts fabricated from them.

Taylor has the service organization... maintains 13 strategically located offices staffed with men qualified to help in the selection and utilization of Taylor materials.

Write for a copy of our laminated plastics selection guide and other literature pertaining to our capabilities for producing materials and parts to your specification. Taylor Fibre Co., Norristown 55, Pa.

Taylor
LAMINATED PLASTICS VULCANIZED FIBRE

freight carrying capacities of each plane will be twice what they are in the presently used converted passenger craft. Swingtail loading coupled with a network of underground conveyors will cut present 4 to 8 hour loading times down to 1/2 hour.

Most of the large airlines are planning to develop all-cargo fleets, as faster, more frequent flights make the freight business increasingly attractive. And, inevitably, the large volume will effect a reduction of rates.

Tied in with the freight-handling facilities at the Los Angeles cargo center would be a \$10-million fully automated post office which is presently being considered by the federal government. This facility, like the freight and express facilities, would interconnect with the new passenger terminal via underground conveyors, because it is anticipated that some 12% of all cargo would be carried by the passenger planes as top-off loading in available baggage compartment space.

At last word, the Airport Commission was studying a \$25,000 report on the feasibility of a jet cargo terminal prepared by Leigh Fisher Associates. How quickly the city proceeds on the project will depend on how fast a current City Hall squabble over Airport Commission appointments is settled.

Both the Los Angeles and Long Beach Harbors also are in the midst of long-range construction programs. Newest project approved for Los Angeles is a \$6.5-million bulk cargo handling facility capable of handling 1.5-million tons/yr. It would be able to load at 2,000 tons/hr. such bulk cargoes as iron ore, potash, borax, and petroleum coke, and it would unload chrome, ore, bauxite, and rutile at the rate of 800 tons/hr. This is part of a five-year \$36-million construction program started last year.

At the adjacent Long Beach Harbor a \$2.5-million grain terminal has just been completed, and a few months ago Richfield Oil dedicated its new \$3.5-million supertanker terminal. The Harbor Commission has kicked off a series of overseas goodwill and trade missions to attract business to the port. A junket to South America has been completed, one to Europe is underway, and a trip to the Orient is set for October.

Meanwhile, the California Legislature is looking into the feasibility of combining the Los Angeles Harbor and the Long Beach Harbor under a single Port Authority. However, no recommendations are expected until at least 1963. One of the avowed motives of such consolidation is to remove management of the key transportation facilities from politics. It might be possible to take the politics out of the harbors, but taking the harbors out of politics might not be so easy.

Exemplifying this problem is the current Los Angeles waterfront brawl involving relocation and consolidation of the scattered operations of the customs service in the city. The dispute, in which various local and national political factions have chosen up sides with opposing civic and business interests, has managed to delay federal appropriations for a long-planned \$30-million federal office building at the Los Angeles Civic Center.

The dispute began when harbor area interests organized and argued that customs services, instead of relocating in the proposed federal center, really ought to be out near the harbor 22 miles from downtown. The Los Angeles County Board of Supervisors, several U. S. congressmen, a senator, and various other officials so far have failed to settle the fight. And at the end of the last round both the proposed civic center federal building site and a compromise solution to build a supplementary \$2-million customs appraisers' stores and warehousing facility at the harbor had been challenged as unsuitable.

ICC Starts Hearings on Santa Fe, SoPac Fight For Control of the Western Pacific Railroad

San Francisco—An ICC examiner began hearings last week on the rival claims of Santa Fe and Southern Pacific for control of Western Pacific Railroad Co.

First week of the hearings were taken up by presentation of Southern Pacific's case. At issue are these conflicting viewpoints:

- Southern Pacific argued that a merger with Western Pacific would eliminate costly overlapping rail facilities, as its lines to Ogden, Utah, roughly parallel those of WP to Salt Lake City, as do its lines from San Francisco to points in Northern California.

- Santa Fe contends its ownership of the 1,100 miles of road would intensify rail competition, as its lines do not overlap WP's. In addition, it does not want to lose the \$18-million annual revenue it gets from freight interchange with WP.

Santa Fe contends that strong competition from another railroad is needed in the area jointly covered by Southern Pacific and Western Pacific in order to keep freight rates down. According to Santa Fe, Southern Pacific could charge shippers maximum freight rates if it controlled Western Pacific instead of present rates, which are below ICC ceilings.

At the heart of the hearings, the Justice Dept. recommended that applications of both railroads be thrown out because the two lines, along with other railroads, have been buying Western Pacific stock

since the control fight began in October.

Hearing examiner Paul C. Albus indicated it would be some time before the full commission would be able to take any action on the Justice Dept. proposal.

The battle for control is expected to be a prolonged one. Following the San Francisco hearings, sessions will take place in Salt Lake City, Los Angeles, Portland, and Seattle. The hearings then return to San Francisco.

Southern Pine Producers Open Drive to Develop New Markets

New Orleans—The Southern Pine Assn. will launch a program to push the lumber industry of the South. The program will include a "substantial" increase in field activities to broaden the base of promotional and technological work, and "to provide maximum counsel and assistance to all categories of buyers and users on proper application of modern Southern Pine lumber products."

Aim is to develop new markets for Southern Pine lumber products in the Midwest and East as well as Southern territory. The present growth of Southern Pine sawtimber in 12 states exceeds drain by 22%, "or by an amazing 2.5-billion board feet per year," according to Alex T. Hunt, association president.

Aluminum Pay Hikes Near; Firms Mum on Price

(Continued from page 1)
the price rise on basic ingots to come later.

• No price action until late fall—after steel acts and when demand is expected to show improvement.

Another thing most metal men are agreed on: In the event that mills do decide to raise ingot prices now, they probably will have to follow through on semi-fabricated items as well. Here's why:

Independent fabricators are already caught in a tight cost-price squeeze—between the cost of the primary metal (their raw material), and the price they get for their fabricated products. Another boost in primary metal (costs) without an accompanying boost in fabricated metals (prices) would only tighten the vise.

The Margin Squeeze

One industry spokesman told PURCHASING WEEK, "Producers are pretty much aware of the margin squeeze facing nonintegrated fabricators, and they would not want to do anything that would inflame an already touchy situation."

In fact, some people feel this squeeze on the independents may prompt producers to boost fabricated lines first, and leave price adjustments on the primary metal for later. Such action would, of course, give the independents some badly needed relief, and also provide greater revenue for the integrated producer.

The recent improvement in demand for mill items tends to support the view that fabricated prices may go up first. Shipments of these products at latest report are up 10% above the previous month—and at the highest level in more than a year and a half.

Moreover, the improvement has been pretty widespread. Extrusions rose almost 15% over the last month, pushing the 1961 total-to-date up to 1960 levels. And in the key sheet and plate areas some 66,972 tons were shipped in May, the highest level since July 1959.

Only Temporary

But even if producers do forego an ingot price rise in favor of increases in mill products, it would only be a temporary decision. For continued wage increases make an eventual price rise in the primary metal almost certain.

The new 9½¢/hr. wage increase due next week means that wage and fringe costs will have gone up almost 70¢/hr. in the past four years. That's in sharp contrast to the price of the primary metal which is still 26¢/lb.—the same price as that prevailing in 1957.

The cost-price gap shows up in the relatively poor profit margins made by the Big Three aluminum producers. Last year, for example, they showed less than a 3% return on assets. That's pretty low when compared to the nonferrous metal average of 7.8%.

Competition probably will call the turn on when primary metal tags will rise. At current operating rates (roughly 77% of capacity) many observers feel that a price boost in ingots could not be made to stick. They think

production would have to go up to 85%-90% before demand would warrant a general price increase.

Another factor militating against any across-the-board increase now is the severe inter-industry competition faced by producers. Just the other week, for example—in the face of expected wage boosts—suppliers cut can stock almost 9% in a move to remain competitive with tinplate.

It's this inter-industry competition that has prompted some aluminum men to think that

prices won't be hiked until late fall.

By that time steel will have had to make a decision on its price (steel wages go up Oct. 1), and it's very likely that if steel prices are boosted, tinplate and a lot of other products in direct competition with aluminum will go up, too.

That would take a lot of the pressure off aluminum prices. Also by that time aluminum demand may be much higher, particularly if automobile and appliance demand improves as expected.

Detroit Changing to Two-Ply Tires In First Major Shift Since Tubeless

(Continued from page 1)

equipment tires—Goodyear, Firestone, U. S. Rubber, B. F. Goodrich, and General Tire—are shipping their entire output of the new tires to the auto industry for the 1962 models. Some of the smaller companies have been offering their versions on the replacement market—and the big five will go after this market later this year.

Rayon-Nylon Battle Continues

The OE tires are all being built with Tyrex rayon—the same material that has been standard for the four-ply tires put on new cars. However, much work has been done with nylon, and the nylon two-ply will be built for replacement purposes. Nylon captured almost 50% of the replacement market last year.

In appearance, the two-ply tires resemble their older brothers. They weigh almost as much, but the sidewalls are thinner and flex much easier. Most of them bear an inscription such as "two-ply with four-ply rating," indicating that they have at least as much strength as the standard four-ply. This claim is backed up by data from tests made by the auto industry as well as the tire companies themselves.

Two-ply tires first appeared on the 13-in. wheels of the compacts, and some tire engineers felt the thinner tire would be limited to the lighter cars for the time being. But auto company insistence on the tire for the volume lines

this year resulted in a greatly accelerated development.

As a result, the 7.50-14 size (7½ in. cross section and 14-in. wheel) used by Ford, Chevy, and Plymouth—plus a number of other cars—came through in a hurry. Now tire men are pushing work on the 8.00-14, the tire used by Big-Three station wagons and cars in the Pontiac-Olds-Dodge class. These vehicles will probably make a running change and switch to the two-ply during the 1962 model year.

The new tires get their strength by using a tire cord much larger than is used with four-ply. "As the size of the cord goes up, so does its strength and resilience," Walter Lee, Goodyear's director of Tire Research and Development, notes. "Thus we can pack the strength of four ordinary plies into two."

A Softer Ride

"At the same time, the tire gains a softer ride," Lee adds, "because of a more flexible sidewall. Safety improves because of the lower operating temperature, and there is better tread contact with the road."

Actually, two-ply tires are not new to the industry. Goodrich made them from 1913 until the middle 1920's when they were dropped because cotton materials then available were not strong enough to support heavier cars. And Firestone has been building two-ply tires since 1955 for small, lightweight European cars.

Purchasing Week's Purchasing Perspective

(Continued from page 1)

enlist the best brains of industry and education. "The idealized defense systems should be procured only when it is clear that the selected technologies are feasible on an appropriate time schedule," Burriss pointed out.

What makes Burriss' new approach especially timely and significant as far as industry is concerned is that if applied to a wide range of production problems, it could result in lower procurement costs over the long run. And that is something that most producers are vitally concerned about today—because such costs (the major item in any business operation) must be reduced if the current profit squeeze is to be licked.

The story on page 7 spotlights just how uncomfortable the profit picture has become. In the first quarter of 1961 margins were close to post war lows. And while the smattering of second quarter reports already indicates some improvement, there's little reason to believe that we're in for any quick bounce back to 1959 highs.

This feeling is confirmed by a new businessmen's just completed by the National Industrial Conference Board. While the great majority of respondents expect billings to be higher in the second half of 1961, less than one-half anticipate that profits will be higher in 1961 than in 1960.

Put another way: Profits per dollar of sales are going to remain uncomfortably low despite the pickup in over-all volume.

Better procurement techniques are also likely to have a pronounced effect on inventory fluctuations, for part of the postwar zigzagging reflects nothing more than overestimation or underestimation of production needs.

There already are glimmerings of some change in this area. In fact, today's inventory stability (so far there have been no signs of the buildup that featured other recoveries) can be traced to better economic intelligence. And as this continues to improve, it means further opportunities for dampening the inventory cycle.

The important implication of all this is that as inventory fluctuations narrow, it will have a profound effect on general business activity—tending to modify the typical boom and bust cycle.

Anthracite Wins Initial Round in Fight To Sell Coal to U.S. Forces Abroad

Scranton, Pa.—The anthracite coal industry has won the first round in its fight to persuade the Pentagon to buy coal in the depressed Wilkes-Barre and Scranton region for use by the armed forces in West Germany.

Following tests at American military installations, the Defense Dept. has reversed an earlier stand and ruled that anthracite can be burned satisfactorily in German-made coke furnaces.

Before the U. S. producers can tap this market, however, they will have to prove that they can deliver the coal in Germany at a price no more than 25% above that of European coke.

A leading figure in the negotiations for the industry, Harry W. Bradbury, president of Glen Alden Coal Div., said he "anticipated no difficulty in delivering the product at a competitive price."

The industry may also have to overcome opposition from the State Dept., because of expected protests from German mining interests.

Sales to military bases in West Germany could prove to be a real shot in the arm for the anthracite industry, which in recent years has seen its markets slip by 12% to 14% annually. Industry observers estimate that requirements of these bases soon will approach the 800,000 ton a year mark, which compares with U. S. anthracite production in 1960 of 17,453,000 tons.

Price Changes for Purchasing Agents

Item & Company	Amount of Change	New Price	Reason
INCREASES			
Building wire & cable, Romex-TJ type NM & other grades	1% & 5%	
Gum rosins, N. Y., K. M, cwt.....	.25	\$13.00	mkt. supply cut
N, cwt.....	.20	\$13.05	mkt. supply cut
WG, cwt.....	.20	\$13.15	mkt. supply cut
WW, cwt.....	.25	\$13.25	mkt. supply cut
REDUCTIONS			
Synthetic rubber, Neoprene WHV & Neoprene latex			
842-A, Aug. 1, Du Pont, lb.....	.02	.37 & .35	prod. econs.
Nickel bearing stainless steels, Crucible, lb.....	.005 - .0225	hike rescinded
Benzene, U. S. Steel, tanks, gal.....	.03	.31	competition
Gasoline & rubber additives, UOP 88, UOP 88-S, UOP 288, Universal Oil Prods., tklds. (East of Rockies; West, add 2¢) lb.....	.10	.94	prod. econs.
Paracresol, tanks, lb.....	.04	.45	broaden markets
Printing papers, roll grades, Kimberly-Clark, Aug. 1, ton	\$3.00 - \$10.00	low demand
Tin salts, potassium stannate, lb.....	.005	.839	metal ease
sodium stannate, lb.....	.005	.704	metal ease
tin crystals, anhyd., lb.....	.006	\$1.087	metal ease
Menthol, Brazilian, lb.....	.10	\$7.10	competition
Camphor, natural, pwd., lb.....	.03	.60	good supply

Value Analysis Nets Boeing \$6-Million Saving

Late News in Brief

(Continued from page 1)
sibility for producing these results falls to the purchasing department. On the basis of Boeing's experience, it has become pretty evident that these are the areas which VA-oriented P.A.'s are going to be cultivating most intensively:

• **Function evaluation.** According to value analysis consultants, the most dramatic shift in VA thinking has come from identifying functions and preventing unnecessary costs in the initial design stages of a product.

"In order to continue making progress in cost prevention," warns Leslie, "it is a must for purchasing agents to work shoulder to shoulder with design engineers and contribute all the information they have on hand concerning new materials and new sources of supply."

John F. Prendergast, vice president of Value Analysis for Industry, Inc., adds, "The shrewd P.A., when he gets a drawing from engineering requiring a machined part, for example, before he starts looking around to get the lowest bid on the specification, studies the function of the part to find if he can get the same value by another less costly process."

• **Cost analysis.** This VA technique is based on a re-evaluation of an established product to identify and reduce the high cost items in its manufacture. There are two inherent benefits—staying competitive and improving quality.

For example, one company value analyzed an assembly that was losing competitively because of quality complaints. At the end of the study, the firm cut the cost of production and at the same time improved the assembly's performance by reducing the number of parts from 29 to 3.

"There are a number of companies in which value analysis savings are a financial salvation—keeping them in business and improving their sales position," points out Prendergast.

Looking at it another way, failure to carry out value analysis can be a profit drain. V.A. Inc.'s Leslie cites the case of a firm in which value analysis studies had come up with a potential savings on several projects totaling \$180,000 a year. These recommendations were submitted to the decision-making board, but nothing was done. After six months of inaction, with \$15,000 per month leaking out of the profit bucket, the company, in effect had wasted \$90,000. When the consultant warned top management of this, the value analysis program was put into high gear by the company.

• **Vendor ideas.** Kenneth A. Cruise, director of purchasing for Bendix Corp.'s Kansas City Div. who is national chairman of the NAPA's Value Analysis and Standardization Committee, observes, "Those P.A.'s on the value analysis bandwagon are getting new ideas by picking the brains of their callers and passing on suppliers' ideas to their own production people."

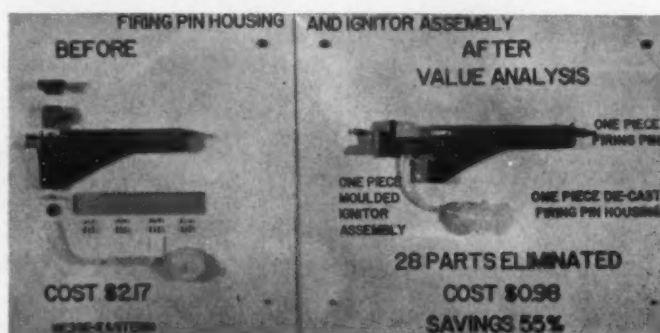
A recent example of this at Bendix was on a large aluminum hemisphere forging approximately 25 in. in diameter. In this forging

design, two vendors supplied hemispheres with 3/4 in. walls that Bendix had to machine to .08-in. A Bendix buyer, feeling there was too much waste material in the job, asked one of the suppliers whether he had an alternative. The supplier suggested trying for a thinner wall in the original forging. Result: The amount of aluminum required was cut in half and Bendix saved \$750,000.

"This kind of thing is a golden

systems cost through value analysis. ABMA's favorite tool in shooting for this goal is via workshop seminars.

In such a seminar, groups of from three to five technical and management people are assigned specific projects on items taken from missile-system hardware—either a component or subassembly—to value engineer. A value-trained engineer acts as a consultant to each group to show the



ON TARGET WITH VA: Before-and-after display illustrates how prime contractor for Army antitank weapon cut costs through VA workshop.

opportunity for the P.A. to show management what value analysis can do and get the assignment for its responsibility on a full time basis in the purchasing department," Cruise advises.

• **Training.** Among the biggest advocates for VA training are the defense agencies. To get more defense for the taxpayer's dollar, these agencies have to work on two levels—instilling value analysis in defense contractors and training their own personnel to appraise the cost of material and services produced and procured. Leading exponent of value analysis through intensive training is the Army Ballistic Missile Agency (ABMA) headquartered at the Redstone Arsenal, Huntsville, Ala.

About 93% of ABMA's \$464-million outlay in fiscal 1961 went to contractors. Early in fiscal '61, the agency commander, Brig. Gen. Richard M. Hurst, set a goal of 25% reduction in missile

proper approach and keep the team from wandering astray.

ABMA conducted its first value engineering workshop seminar in May. Forty ABMA men participated in nine projects, seven taken from the Sergeant missile and two from the Little John system. According to Arthur E. Harvey, Jr., head of ABMA's value engineering office, the seminar generated ideas that will save an estimated 60% on the cost of production of the nine items.

The agency's seminar idea has branched out to the contractors as well. Hesse-Eastern, Division of Flightex Fabrics, Inc., which holds the prime contract for ABMA's light antitank weapon (LAW) system, recently reported to Harvey that from sitting in on a joint ABMA-Martin Co. value-engineering conference, it was able to make sizable cost reductions on components of the weapon.

Priorities Ruled Out for the Present Despite Buildup in Defense Spending

(Continued from page 1)
tion controls—that is, the Korean-type priority and allocation regulations on industrial materials—will not be needed.

Said an OCDM official, "The economy has a long way to go before we are in a stringent enough situation where supply controls are needed to meet military requirements."

He estimated that Defense production requirements would have to be boosted many times the Pentagon's current \$20-billion procurement and R&D level before supply controls would have to be clamped on.

Here are latest military consumption rate figures on other key materials:

• **Steel**—Contractors used only 1.1% of supplies in 1960 and the same rate in the January-March quarter 1961.

• **Copper**—Contractors took up 1.9% of the total in 1960, 2.1% in January-March 1961.

• **Aluminum**—3.1% in 1960, 3.9% in January-March, 1961.

• **Nickel**—3.2% in 1960,

4.8% in January-March, 1961.

Figures cover materials used in prime and subcontracting for the Defense Dept., Atomic Energy Commission, and National Aeronautics & Space Administration.

SKF Bringing Out Guide To Bearing Parts, Terms

Philadelphia — Roller bearing parts and terms, often a perplexing problem to newcomers in the rolling contact bearing field, are defined and illustrated in a new 24-page booklet put out by SKF Industries, Inc.

Other subjects in the booklet, titled "Bearing Parts and Nomenclature of Standard and Precision Bearings," include ball installation, dimensions, loads and alignment. It also covers thrust bearings and bearing accessories such as shields, seals, snap rings, seats, and housings.

Copies can be obtained from SKF, Front St. and Erie Ave., Philadelphia 32.

Tin Salt Prices Decline

New York—Tin salts continued to drop from the record high prices established a few weeks ago. Behind the easing: further dips in the basic metal price which fell last week to \$1.15 as the first tin from U. S.-owned stocks hit the market.

Second Quarter Recovery Substantial

New York—Last week's state of government reports confirm the fact that the second quarter recovery was really substantial: (1) Gross national product zoomed to \$515-billion—some 2.8% over the first quarter; (2) June housing starts hit a 1,274,000 annual rate—6% ahead of May; and (3) June production rose to within one percentage point of the previous record high.

American Can to Pack Soft Drinks

New York—American Can Co. is forming a new division, Custom Packers, which will set up a network of soft drink canning operations in markets presently lacking such facilities. Company will pack brands in cans and cartons of customer's choosing, whether supplied by American Can or not. Initial locations: Baltimore, St. Louis, Cincinnati, New Orleans, Jacksonville, Fla., and Winston-Salem-Greensboro, N. C.

New Firm to Make Fibrous Glass Pipe

Pittsburgh—Apollo Industries, Inc., and Carlton Products Corp. have formed a company to make and distribute fibrous glass pipe. The pipe, result of a processed developed by Apollo, can be produced at prices competing with other materials, according to the two companies. New firm will be called Apollo Fiberglass Pipe Co.

Pittsburgh Plate to Build New Plant

Lake Charles, La.—Pittsburgh Plate Glass Co.'s Chemical Div. will build a 15,000-ton per year sodium chlorate plant at its facility here. It will go on stream in September, 1963.

Rohm & Haas Develops New Binder

Philadelphia—Rohm & Haas Co. announced a new acrylic resin textile binder, Rhoplex HA-16, said to possess improved durability and be the firmest and driest resin in the company's line of Rhoplex products.

Boosting of Warranties on New Cars Held Unlikely for 1962 Model Year

• **Lube-free chassis.** Virtually all new cars will have this feature in one form or another. Ford products at the beginning of the 1962 model year will stand pat with last year's factory-sealed lube joints with a 30,000-mile relubrication interval. Chrysler is expected to feature a 32,000-mile interval in new models. It is even considered possible that both Ford and Chrysler will change to a lubed-for-life chassis in mid-model season. General Motors is expected to offer this "lifetime" lube chassis in new models, following the lead of its Cadillacs which went to a lifetime lube last year.

• **Sealed-for-life automatic transmissions and rear axles.** At least one auto division is now definitely committed to this feature, it is understood, with others expected to follow next year if not in 1962. The units would not even have drain plugs.

• **Two-year, long-life coolants.** Some auto divisions will be adding these as factory-installed items this year.

• **Self-adjusting brakes.** Following Ford's lead, other manufacturers are expected to expand application of this feature.

• **6,000-mile crankcase drain interval.** One of the Big Three is reported to be ready to offer this for all its divisions this year.

Another of the three, which dropped back to a 2,000-mile oil change last year, will return to 4,000 for 1962.

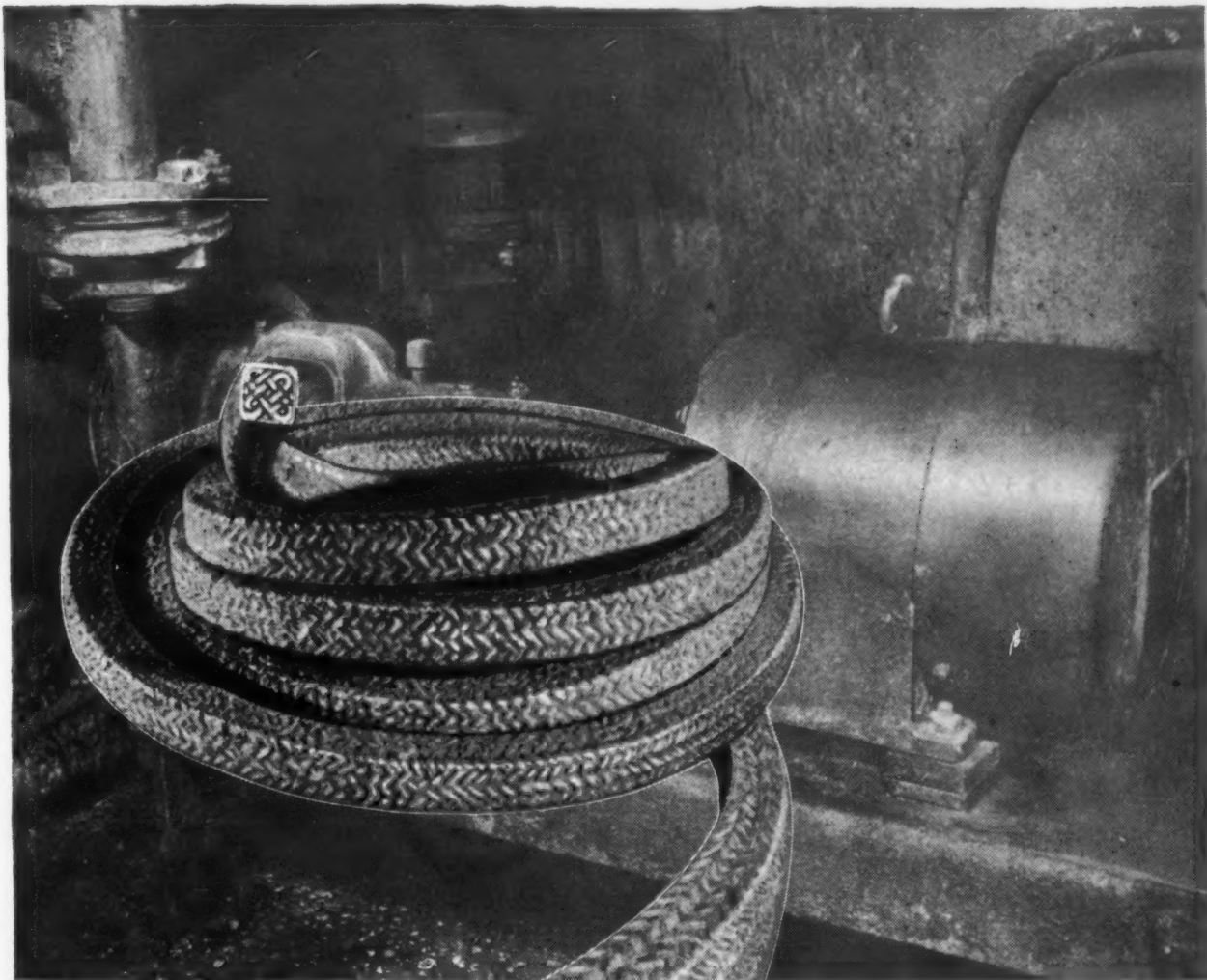
It is also becoming increasingly evident that the auto-makers are using oil drain interval mileage as a yardstick to determine when other services are required. For example, if the oil change is every 4,000 miles, all other service requirements will come in 4,000 mile increments. If the oil change is 6,000 miles, all other periodic service will come in multiples of 6,000 miles.

This accounts for the 30,000 and 32,000 mile chassis lube refill recommendations, and explains why one maker will drop its automatic transmission drain and refill recommendation from every 26,000 to every 24,000 miles.

Fleet Owner, a McGraw-Hill publication, reports that Ford is seriously considering a switch to the 27-27 warranties. Purpose would be to give first owners full protection for 27 months, which Ford figures is the period of average ownership before trade-in on new Fords.

The catch in putting the plan into immediate effect, the magazine says, is the need for engineering improvements that would cut mechanical service calls to no more than twice a year in the warranty period.

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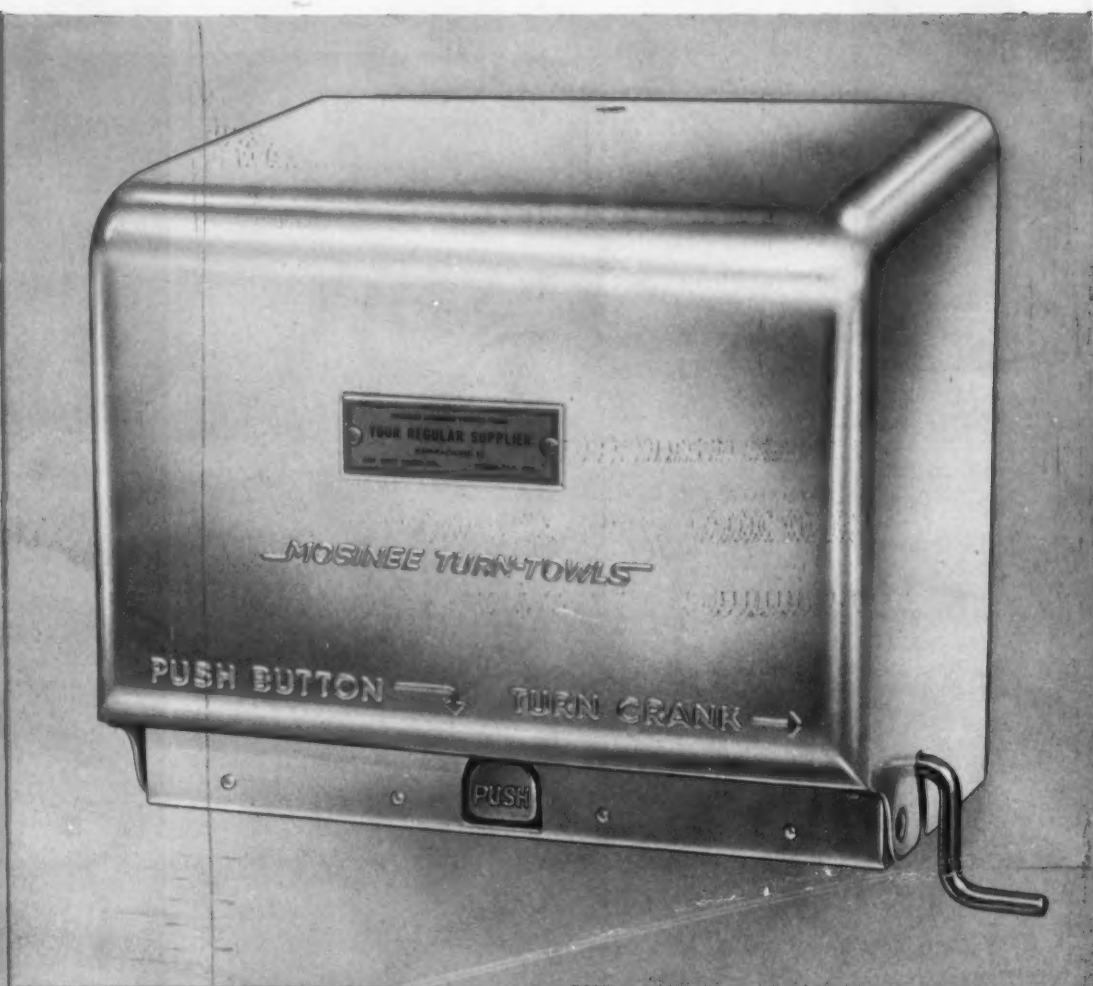
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